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**EVALUATION OF
GROWTH SLOWING POLICIES
FOR THE SAN DIEGO REGION**

San Diego



**ASSOCIATION OF
GOVERNMENTS**

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San Diego



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ABSTRACT

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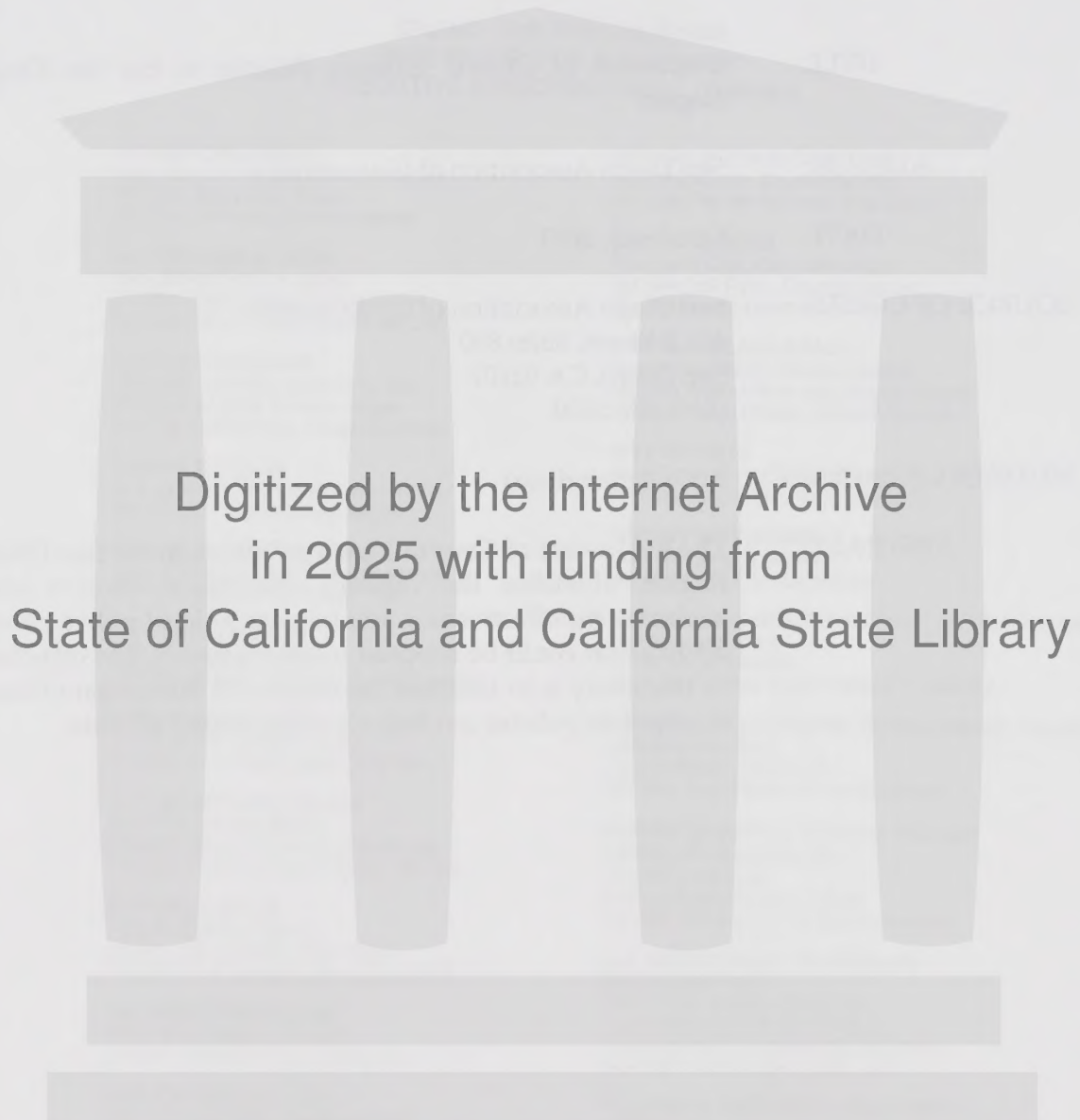
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ABSTRACT: The Evaluation of Growth Slowing Policies in the San Diego Region identifies the region's sources of growth and evaluates the effectiveness and impacts of local public policy actions that could be adopted to slow growth. The objective of this study is to facilitate the continued discussion of how local public policies can help chart our region's future.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Many people are concerned that the forecasted population increase will strain the region's ability to maintain its high quality of life.

SANDAG's 2020 Growth Forecast, released in 1998, projects the region's population will grow to 3.8 million people by the year 2020. The increase will be fueled by births and migration, and sustained by an economy that is forecasted to provide more than 300,000 new jobs. (It should be noted that SANDAG is currently updating its Regional Growth Forecast, and the preliminary forecast shows a somewhat lower population in 2020. The slower population growth is primarily attributable to declines in fertility, especially among Hispanic women.)

Is growth inevitable?

The SANDAG Board of Directors asked for a research study to provide answers to some basic questions: Why a million more people? Why not some lesser amount? Can growth be controlled or limited? If so, how? What would the impacts be? What happens beyond 2020? What is the region's population carrying capacity?

WHAT WE HAVE CONCLUDED

Not an endorsement of growth.

First and foremost, this report does not advocate population growth. It does not find that growth is inherently good, or that we need to continue to grow in order to prosper. Growth continues to occur in the San Diego region for two basic reasons: this region is a desirable place to live, and jobs are available.

Population growth in the San Diego region will continue, and we must plan for it.

This analysis concludes that some amount of growth is likely to continue to occur in the region, and that we should plan for it and manage it responsibly. Public policies designed to slow growth, whether implemented individually or in combination, would be ineffective.¹ People and businesses can and will adapt to restrictions on housing and employment space.

¹ In addition to individual policies, we also simulated all possible combinations of the policies. The results of the combination policy simulations were not significantly different than the results of the individual policy simulations.

We have time to act.

Whether or not the pace of growth is correctly stated as “a million more people by 2020” does not matter. At least for the foreseeable future, the region will continue to grow. So, while we continue to discuss growth issues, we must also concentrate on maintaining our quality of life in the context of continued growth.

We need a Regional Plan.

An important thing to remember is that the new residents will not all arrive here tomorrow. In fact, our rate of growth has slowed since the 1980s, and that slowdown will continue. Now is the time to develop and implement a collaborative strategy to proactively plan for growth.

The important issue is to protect and enhance the region’s quality of life. Quality of life means different things to different people. It is not determined simply by how many people live in a certain area. Rather, it is an interrelated function of many things: air quality, water quality, open space, mobility, urban design, adequate infrastructure, amenities and services, and a strong economy, among others. The region must reach consensus on strategies to resolve a wide variety of independent, yet interrelated issues.

We need state-local fiscal reform.

There is at least one very critical issue that requires legislative changes at the state level: fiscal reform. The current state-local fiscal system is a major impediment to any policy designed to manage growth. Having lost much of their control over tax rates and revenues, local governments are trying to regain their fiscal powers through land use policy. They seek new development that produces taxable sales, while retreating from their responsibilities for accommodating the state’s urban population growth.

We need to embrace smart growth principles.

A sound regional approach must be based on the principles of smart growth: reducing urban sprawl, placing jobs near housing and housing near jobs, offering more choices in housing types and in transportation modes, and providing adequate infrastructure of all types.

We have taken the first step.

The region has already taken a good first step with the adoption of the Regional Economic Prosperity Strategy in 1999. The Strategy is the result of a comprehensive, dedicated effort of people representing the local government, business, and academic sectors as well as the general public. This type of collaborative, inclusive process is the best way to proceed from here.

Quality of life depends on good planning.

Finally, the research is clear on two points: 1) Growth will occur even if it is not planned for, and, 2) The failure to adequately plan, fund, and provide appropriate infrastructure are the primary causes of deterioration in quality of life.

WHY THIS STUDY IS DIFFERENT

How will people react to growth slowing policies?

SANDAG has produced three studies on growth alternatives in the past. This study builds on those previous efforts, as well as on studies about other parts of California and the nation. It incorporates a better understanding of how individuals and businesses might react and adapt to restrictions on growth. This reaction is measured by their tolerance or willingness to accept outcomes such as longer commute distances and more persons per household. Our research shows that people are not deterred by local public policies designed to slow population growth.

A different way to produce a report...yet, no consensus was reached on whether local policies can slow population growth.

A unique aspect of this report is the manner in which it was produced. Rather than the usual process of research-write-present, we chose instead to take a more interactive approach. The idea was to solicit diverse opinions as the report was taking shape. Although no consensus was reached by members of the Citizen Review Panel on the central question of whether local public policies can successfully slow population growth, there was broad agreement that the preservation of our quality of life is our most important local public policy objective.

A panel of nationally known experts reviewed the original draft of the study. Their observations and suggestions were incorporated into the next revision. That version was then presented to a Citizen Review Panel composed of local people with diverse points of view on growth. Many of their ideas and comments were assimilated into the final draft.

WHAT OUR RESEARCH FOUND

No region in the country has ever successfully stopped or slowed population growth through local public policy.

Public policies designed to slow growth are largely ineffective.² The results of implementing such policies are not impressive. Where individual jurisdictions have enacted growth control policies, the growth has shifted to nearby areas, or growth continues without the facilities and services necessary to preserve the area's quality of

² Other studies have also reached this conclusion: 1) "Evaluation of No-Growth and Slow-Growth Policies for the Portland Region." Prepared for Metro by Eco Northwest, June 1994. 2) Landis, John D. "Do Growth Controls Work? A new assessment." Journal of the American Planning Association, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL. 3) Glickfeld, Madelyn and Levine, Ned. "Regional Growth...Local Reaction: The enactment and effects of local growth control and management measures in California." Lincoln Institute of Public Policy: Cambridge, MA.1992. 4) Center for Continuing Study of the California Economy. "Land Use and the California Economy." A report for Californians and the Land, 1999. 5) Kolankiewicz, Leon and Beck, Roy. "Weighing Sprawl Factors in Large U.S. Cities." NumbersUSA.com, 2001.

life. For example, growth controls in Santa Barbara and Portland have been circumvented by rapid growth in nearby communities. Implementation of such policies in the San Diego region would require the involvement of not only all 19 local jurisdictions, but that of Riverside County, and Baja California as well.

Local public policies have little influence over the sources of population growth.

There are only two sources of regional population growth: net migration and natural increase. Local government has no direct control over the number of births in the region, the number of military personnel, or the rate of foreign immigration. Over the past 20 years most of our growth was the result of domestic migration; today, foreign immigration accounts for a larger portion of our growth. Furthermore, foreign immigration does not appear to be as sensitive to fluctuations in the local economy as does domestic migration. Whatever the condition of our economy, our region is more attractive compared to where the majority of foreign migrants originated.

Employment growth induces and sustains our region's population growth.

Local public policies have the potential to influence only one component of our population growth: domestic migration related to employment opportunities. When jobs exist, people come here to fill them. When jobs go away, people migrate elsewhere. We saw this clearly during the recession of the early 1990s. Between 1991 and 1996 net domestic migration (the difference between people leaving the region and those coming here from other parts of the nation) was *minus* 175,000 people. It is noteworthy that during this same time period, net foreign migration was *plus* 79,000 people, illustrating the fact that foreign migration is not sensitive to economic downturns.

Why not target the economy and jobs to slow population growth?

Jobs and job growth are considered to be of fundamental importance to quality of life. For this reason, government, civic and business leaders, and the majority of the public historically have been unwilling to intentionally constrain the region's economy to the degree necessary to appreciably slow the population growth rate. And, because such policies have never been tried, there is risk and uncertainty associated with their implementation.

Our region can set a population carrying capacity...

Some have suggested that the San Diego region should determine an ultimate population carrying capacity based on resource and biological limitations. There is value in doing this, particularly as a monitoring tool for the region's ecological health. However, our research suggests that local public policies could not enforce a predetermined population cap. Local government can put limits on housing units, but not on the population within them.

...but local public policies cannot enforce it.

Also, a finite carrying capacity is only as rigid as current technology. For example, 80 years ago the carrying capacity of southern California was a fraction of what it became with the advent of imported water. In the future, desalination technologies might enable the same sort of leap. There is no consensus on the efficacy of developing an estimate of human carrying capacity, but more to the point, no way to prevent any such number from being exceeded.

The less affluent will bear the brunt of housing and job shortages.

Finally, the research suggests that policies designed to slow growth through restrictions on housing units or jobs result in increased social inequity and polarization. The less affluent will bear a disproportionate share of the pain that results from inadequate economic opportunities to meet a rising cost of living. Although worse off, this segment of the population will endure the hardships and continue to grow. These social costs of not planning for growth clearly are not equitable. However, with adequate planning and infrastructure, we can envision a multitude of equitable, positive, and smart growth choices for the region.

WHAT OUR IMPACT SIMULATIONS SHOWED

What would our growth path be under alternate policies?

An impact simulation compares a baseline projection against an alternative. In this study, the 2020 Regionwide Growth Forecast is the “baseline,” against which a slower growth alternative will be compared. Different outcomes, or growth paths, result from different public policies being in effect.

Despite various methods of implementation, public policies available to local government that have the potential to influence growth can generally be divided into three main categories:

- Policies that limit the supply of housing.
- Policies that limit the capacity of the economy.
- Policies that target public expenditures.

We also consider national immigration policies and family planning programs.

Limits on Housing: The Most Common Way Jurisdictions Attempt to Slow Population Growth

Limiting housing by 40 percent results in...

Restricting housing is a common approach to slowing growth because jurisdictions can directly control new housing through the permitting process, and housing and population are related. The baseline forecast suggests an average of 17,300 housing units will be built annually between 2000 and 2020 in the San Diego region. Restricting housing growth to 40 percent below the baseline level in an attempt to match the U.S. population growth rate results in 10,400 units built annually. This policy would provide 139,000 fewer units than the baseline housing forecast in 2020.

...higher household size and the potential for overcrowding...

Over the past 20 years the region's housing growth did not keep pace with its job and population growth. According to the 2000 Census, the number of persons per housing unit has increased in the region, which is in contrast to the national figures, where household size declined. The Census also indicated a sharp drop in residential vacancy rates in the region. In addition, the number of workers who commute into the region has more than tripled over the past 20 years. Without these commuting, vacancy rate, and household size adjustments, the region may have needed to build an additional 99,000 housing units between 1980 and 2000. The research indicates that increases in persons per household and commute distance are typical reactions that decrease the ability of housing restrictions to slow population growth.

...increased long distance commutes...

...and only 11 percent less of a population increase by 2020.

In our simulation, restricting units by 40 percent between 2000 and 2020 resulted in only an 11 percent reduction in the population increase from the baseline forecast—about 102,000 fewer people. Furthermore, the reduction in housing units caused more workers to commute in from outside the region. As a result, population growth slows by less than one percent if the greater San Diego region, including adjacent areas, is taken into account.

Overall population growth is virtually unchanged if the "greater region," including adjacent areas, is taken into account.

The simulation revealed that most of the baseline population growth could be accommodated in the region with household size increases similar to those observed between 1980 and 2000. Moreover, the simulated household size of 2.95 in 2020 is below the current household sizes in the counties that surround the San Diego region. Restricting housing units below the level demanded also increases housing prices, making housing even less affordable for many residents.

Population growth that occurs without comparable housing unit growth will affect everyone through increased demand for roads, schools, parks, libraries, and other public facilities. These impacts are most severe in lower income communities. Also, impact fees

from new housing units are used to fund public facilities, services, and infrastructure. For example, without fees from housing for new school construction, school districts will face enrollment growth without an important source of revenue.

Limits on the Economy:

Few Communities Have Adopted and Maintained Economic Restrictions

Limiting non-residential space by 40 percent results in...

This policy directly focuses on a source of regional population growth: domestic migration related to employment opportunities. Accommodating the 2020 baseline forecast growth in employment would require the construction of an average of five million square feet of nonresidential space each year. Limiting annual nonresidential square footage by 40 percent below the baseline estimate is consistent with the objectives of the previous simulation and would allow for the construction of nearly 3.1 million square feet annually.

...lower vacancy rates, and higher lease rates and densities.

Limiting the amount of available employment space did not reduce demand. It did, however, decrease non-residential vacancy rates and increase employment densities and regional lease rates. In this simulation, the reduction in non-residential vacancy rates and rise in employment densities did not exceed historical ranges for the region.

The region can absorb additional employment growth through increases in employment densities.

The simulation showed that, as with housing limits, a local policy designed to reduce the economy's capacity to accommodate job growth will be ineffective. Because of the region's ability to accommodate additional employment in existing space, population and employment growth is unchanged from the baseline in 2020.

One impact may be that the mix of industries in the region will change, because the region becomes a more expensive place to do business, and firms are competing for a limited amount of space.³ However, because the policy does not slow population or job growth, or affect housing supply or demand, most of the outcomes are the same as in the baseline forecast.

This policy does not slow population or job growth, or affect housing supply or demand. Not planning adequately for employment growth may be responsible for metropolitan

³ In San Francisco, for example, where annual limits on new office space are in place, an unexpected consequence occurred during the technology boom of the late 1990's: technology companies infused with venture capital displaced small businesses, non-profit groups, and even medical services.

This policy does not slow population or job growth, or affect housing supply or demand.

economies sprawling to previously unimagined extents. The Central Valley east of the San Francisco Bay Area, and the Inland Empire east of Los Angeles are feeling the growth pressure of neighboring job centers. The City of Tracy (located 55 miles east of Silicon Valley) is now developing growth control and management strategies, as is our own neighbor, the City of Temecula.

Targeting Public Expenditures: A Public Policy Designed to Adjust the Makeup of the Economy and Slow Population Growth

A balance of high and low value added employment has the potential to reduce growth.

A less restrictive approach to slowing growth may be to target public expenditures to encourage a form of economic development that does not require as much population growth. The baseline forecast projects that the local economy will produce more than 300,000 new jobs between 2000 and 2020. These jobs are being created in response to the products and services that the region is expected to produce over the next 20 years. The mix of products and services we produce determines our labor force needs, and influences our population growth. A strategy designed to better balance high and low value added employment growth has the potential to reduce overall population growth.

But there are reasons it could fail.

As we will see, although promising and regionally beneficial, this policy, like the previous two, also can be thwarted.

The productivity of the cluster will determine the number of workers.

This policy would shift the growth of economic output from low to high value added industries. Because they are relatively more productive, high value added industries and industry clusters, such as biotechnology and communications, require fewer workers to produce a product or provide a service than do low value added industries (visitor services, entertainment, etc.). Government investments in certain infrastructure and public policies that encourage growth in high value added sectors of the local economy could provide the initial stimulus for this shift. These public sector infrastructure improvements would also stimulate private sector investment.⁴

Targeting specific employment clusters for job growth may result in an eight percent reduction in population.

The simulation results in a regional population of about 70,000 fewer people than the baseline forecast in 2020. Because a greater proportion of the region's growth in output will be in high value added industries, the region also needs 33,000 fewer jobs in 2020 than in the baseline. Real per capita income is two percent higher

⁴ Additional information regarding strategies designed to change the region's job mix is provided in Section III of this study and SANDAG's report, "San Diego Regional Economic Prosperity Strategy: Creating Prosperity for the San Diego Region." July, 1998.

than the baseline because a greater proportion of residents will be working in high value added industries in 2020. Housing is more affordable, because incomes have risen while the price of housing has declined compared to the baseline. A smaller population also generates less demand for new housing units. Under this policy, the region requires 26,200 fewer units than under the baseline scenario.

However, if the local labor force is unable to meet the demands of local firms, the region will have to import workers, and the population could rise, not fall.

Despite these positive outcomes, the ability of this policy to slow population growth is uncertain. For example, it will be difficult to exclude low value added industries from benefiting from these actions. And historically, local government has invested in infrastructure that directly benefits low value added industries. If low value added industry benefits as much as high value added industry, population growth may not slow, or may even increase. Also, a key factor in this simulation is the ability of the local labor force to meet the challenges presented. The time required to improve the skills of the local labor force is uncertain. The local education system, work force development programs, and other agencies involved in training the labor force may not have adequate funding or time to meet the challenges this strategy presents.

Reducing Fertility Rates: Getting to the Root of Population Growth

Can expanded family planning programs slow population growth?

Reducing the number of future births by lowering fertility rates through expanded family planning programs has been suggested as a policy for slowing population growth. Government could target more resources toward family planning and public health education. Local government could also lend a strong voice toward advocating for national family planning policies.

A policy directed at family planning programs with the intent of slowing future population growth in the region raises a number of issues.

We conclude that a policy directed at family planning programs with the intent of slowing future population growth in the region raises a number of issues. First, no public policies exist at any level of government in the U.S. to control the number of children that a family wants to have, nor are any ever likely to be enacted. Current fertility rates are already very low in the U.S. and in the San Diego region, corresponding to a family size of about two children per couple. Our forecasts of these rates are stable or declining for every ethnic group. Finally, the ability to reduce births through family planning programs is limited to reducing unwanted births. Unwanted births have fallen to only ten percent of total births, including births that occur sooner than planned.

We are not suggesting that family planning programs are not important. These programs result in a number of health benefits including helping people have the number of children they want when they want them. However, family planning programs or

governmental policy do not control or determine family size goals and desires.

Reducing International Migration: Addressing an External Source of Growth

Foreign immigration contributes to our region's annual population growth.

A significant portion of the San Diego region's population growth between 2000 and 2020 will come from international migration. In addition, although they have declined, higher average fertility rates of the region's international migrants contribute to greater levels of natural increase. Some feel that policies directed at reducing foreign immigration would slow population growth in the region. This may not be the case, however.

Local policies cannot control foreign immigration.

Local public policy has no direct control over international migration. Furthermore, if national policies were to change so that international migration were reduced, the impact on our region is unclear for at least two reasons. First, domestic in-migration may increase to meet the local demand for labor no longer filled by international migration. If the local economy continues its strong performance, the region will need to import workers to meet the demands for labor. Second, the region's share of the nation's international migration might change; a reduction at the national level is no guarantee of a reduction in the region.

NEXT STEPS

There are other things to consider.

This study was designed to answer the basic questions posed in response to the 2020 Forecast. It is intended as a starting point for continued public discussion of the issues. We recognize that other important topics are not fully addressed here.

What are our infrastructure needs?

The most important is a discussion and analysis of the public infrastructure that is necessary or desired to support future growth. As a next step, current infrastructure deficits, future needs, and financing options should be considered.

What about carrying capacity?

Such a study should include several elements related to the region's carrying capacity, such as water supply and quality, energy needs, and open space/habitat preservation.

Section I

INTRODUCTION

The San Diego Association of Governments projects the region's population will grow to more than 3.8 million people by the year 2020. This increase of 907,000 people over the next 20 years will be fueled in large part by the forecasted increase of more than 300,000 new jobs in the region. To accommodate the added population in the traditional manner will require about 365,000 new homes. Many people have expressed concern about accommodating the expected growth; they fear that the increase in activity will strain the region's ability to maintain its high quality of life.

Since the San Diego Association of Governments' 2020 Regionwide Forecast was released in the summer of 1998, local elected officials and the general public have reacted with concern, and are asking several key questions:

- Is growth really inevitable?
- Why a million more people by 2020? Why not some lesser amount?
- Can growth be slowed or stopped? If so, how? What would the impacts be?
- What happens beyond 2020?

This study has three main objectives: 1) address these questions and their related issues, 2) provide guidance and insight for future forecasts, and 3) provide perspective on the role of a Regional Plan.

WHAT MAKES THIS STUDY UNIQUE?

SANDAG has produced three previous studies on growth alternatives.⁵ Each was called for during a period of rapid population increase, and people's attitudes then were similar to those of today. Here is an excerpt from the first study, produced in early 1979: "The rate of population growth in the San Diego region has long been a matter of concern to the region's citizens. The Goals Survey, conducted in 1978, found that less than three percent of the respondents wanted to see population increase by a great deal, while almost 70

⁵ "Assessment of Alternative Regional Growth Policies." February, 1979. "Growth Limitation Policy Study." April, 1980. "Causes of Growth and Possible Control Measures in the San Diego Region." September, 1987.

percent wanted to see population stay at its present level or decline.”⁶ Since that study was published, the region has grown by about one million people.

The previous studies concluded that population growth could be slowed through public policies directed at restricting housing or the economy, but the region did not implement them because the negative consequences of doing so were either too severe, or politically unfeasible. In particular, the economic consequences were so severe the region was unwilling to incur them. Since the earlier studies were produced, we have gained a better awareness of how the region can accommodate population growth, and whether or not growth can be slowed.⁷

The current study is intended to be more than a simple rehash of the previous efforts. This study simulates policies by allowing them to change the way the region grows, and represents different paths of development. It also incorporates a better understanding of how individuals and businesses might react and adapt to restrictions on growth. It recognizes that people can and do commute to and from work across county lines and the international border. It incorporates findings on the region’s ability to accommodate population through individual responses such as longer commutes and larger household sizes. The result is a new look at what might happen if the region decides to endorse policies that attempt to slow population growth.

DEFINING THE REGION

It is useful to clarify the term “region” when discussing the impacts of policies designed to slow population growth. There are two ways to view the San Diego region. The first is the political boundary that surrounds all 18 cities and the county government. This regional boundary is the functional, regional planning unit over which local jurisdictions collaboratively have authority. From this restricted perspective, as long as growth slows within the regional political boundary, policies will be seen as effective.

Another view places the San Diego region in the broader context of our neighbors to the north, south and east. Residents of these areas interact with the San Diego region on a daily basis. Increasing economic and social interaction between the region and its neighbors broadens the geographic definition of our “region.” In this view, policies that reduce population in the San Diego region while increasing population growth in nearby communities like Tijuana or Temecula are not successful at stopping population growth. Pushing growth to surrounding areas does not remove the negative impacts associated

⁶ Goals Survey, SANDAG, 1978. Citation from “Assessment of Alternative Regional Growth Policies.” SANDAG, February 1979.

⁷ SANDAG’s previous studies on growth slowing policies showed that it was possible to slow population growth by enacting the most severe restrictions on housing or the economy. However, these policies were never implemented. This study explores more realistic policies that could be adopted, and evaluates their growth-slowing potential.

with additional population. People who commute here to work, and still use our roads, water and other infrastructure might not be paying as much for it because they often shop outside of our political boundary and pay property taxes in other jurisdictions.

For the purposes of this study, the San Diego region is defined as the regional, political boundary that encompasses the 18 cities and the County. However, while discussing the impacts of growth slowing policies, we make reference to the “greater region” shared between the San Diego region and its neighbors. It is impossible to discuss the impacts of policies locally without accounting for responses in other surrounding areas.

CENSUS 2000

As this study was being prepared, the U.S. Census Bureau released the official 2000 census count for the San Diego region. The total population on April 1, 2000 was 2,813,833, about 98,000 fewer than the California Department of Finance's January 1, 2000 estimate. This means that the region added 316,000 people, or 13 percent, between 1990 and 2000. The ten-year population growth was the lowest since the 1940s, and the growth rate was slightly lower than the national growth rate (14 percent), and the slowest in the region since the 1890s.

The lower than expected population does not change the conclusions of the study. The estimates correctly indicated that growth was slower in the 1990s than in the 1970s and 1980s. Also, measuring growth over a ten-year period masks the contrast between the recession of the early 1990s and the economic boom of the late 1990s. The region added 12,000 wage and salary jobs between 1990 and 1995, and 219,000 jobs between 1995 and 2000.⁸ Clearly, most of the decade's growth occurred after 1995. During the past few years the region has been growing faster than the nation.

The parameters used in the simulations in Section II and the discussion of historical population growth in Section IV incorporate recently released census data. For consistency with the baseline forecast, other parts of the study use estimated data for 2000. More detailed census data needed to analyze trends in domestic and international migration, household formation rates, and interregional commuting is not yet available. SANDAG has begun to update the forecast through the year 2030.

⁸ California Employment Development Department, San Diego MSA Annual Average Industry Employment, 1983 to 2000, March, 2001.

SOURCES OF GROWTH

Collectively, local jurisdictions do not have the ability to stop all of the sources of population growth, or to prohibit the region from accommodating more people. Our research confirms that it is not possible to stop population growth in regions like San Diego using public policies.⁹ For a policy to be effective at slowing growth, it must prohibit the region from adjusting to restrictions and address at least one of the region's two primary sources of growth: natural increase (births minus deaths) and migration. Migration can be divided into three major components: foreign immigration, domestic migration in response to employment opportunities, and migration related to the number of military personnel in the region.

From a local public policy perspective, it is difficult to control the number of births, the number of military personnel, or the rate of migration from areas outside the United States. International and military migration are subject to national, not local, policy. Foreign immigration does not appear to be sensitive to fluctuations in the local economy. Whatever the condition of our economy, the San Diego region is often more attractive compared to where many foreign migrants originated. Fertility choices are not regulated at any level of government.

Local public policies can potentially influence growth through just one component: domestic migration related to employment opportunities. Domestic migration is very sensitive to economic conditions. As we demonstrate in Section II, however, people and businesses adjust to and blunt restrictions on growth, making it impossible for any local policy to completely stop the regional population from growing. For example, restrictions on housing cause adjustments including larger household size, conversion of seasonal units into year round housing, and increased interregional commuting. Attempts to restrict the economy cause similar adjustments, including higher employment densities and lower vacancy rates.

POPULATION TARGET: THE U.S. RATE

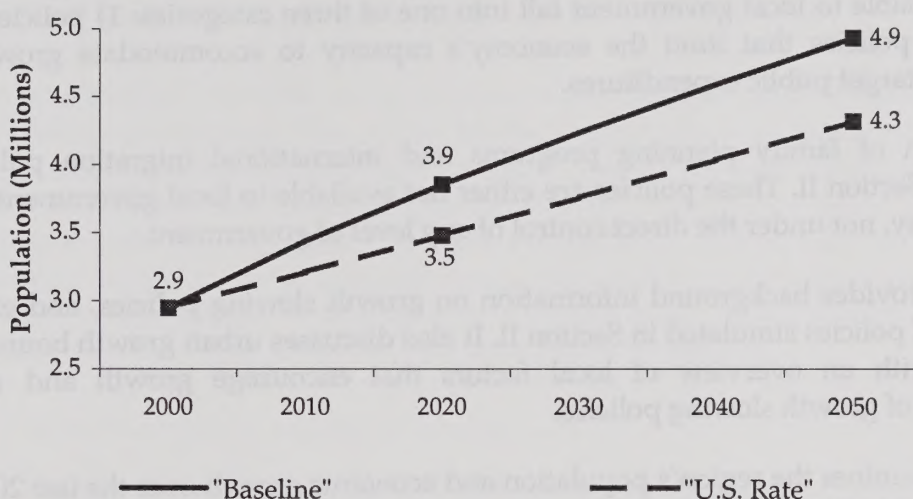
For this simulation we established a population target based on the rate of population growth in the U.S. The region's population growth rate has historically exceeded the nation's, and is expected to continue to do so through 2020. The U.S. is expected to continue to grow over the next twenty years at an annual average rate of 0.8 percent. Average annual

⁹ Other studies have reported similar findings, including: 1) "Evaluation of No-Growth and Slow-Growth Policies for the Portland Region." Prepared for Metro by Eco Northwest, June 1994. 2) Landis, John D. "Do Growth Controls Work? A new assessment." *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL. 3) Glickfeld, Madelyn and Levine, Ned. "Regional Growth...Local Reaction: The enactment and effects of local growth control and management measures in California." Lincoln Institute of Public Policy: Cambridge, MA.1992. 4) Center for Continuing Study of the California Economy. "Land Use and the California Economy." A report for Californians and the Land, 1999. 5) Kolankiewicz, Leon and Beck, Roy. "Weighing Sprawl Factors in Large U.S. Cities." NumbersUSA.com, 2001.

growth in SANDAG's 2020 Regionwide Forecast (referred to in this study as the baseline forecast) is 1.4 percent between 2000 and 2020.

If the region were to mirror the U.S. growth rate in the 2000 to 2020 period, the region's growth rate would be 0.8 percent annually, and the region's population would be 3,477,600 in 2020, as shown in Figure 1. Instead of growing by 907,000 people by 2020, the region's growth would be 531,000 people — about 40 percent less population growth. For this study, reaching the 2020 population target means the policy successfully slows growth.

Figure 1
Baseline and "U.S. Rate" Population
San Diego Region, 2000-2050



This study also looks at how large the region's population might be in 2050. To extend the region's baseline forecast we compared the region's 2000 and 2020 populations to the national forecast. The region's share of U.S. population grows from 1.07 percent in 2000 to 1.15 percent in 2010 and 1.19 percent in 2020. If the region continues to increase its share of U.S. population, but at a decreasing rate, as in the 2000 to 2020 period, by 2050 the region will comprise 1.22 percent of the total U.S. population. This share applied to the U.S. forecast suggests that the region's population could be 4,934,800 by 2050 — nearly 1.1 million higher than in 2020.¹⁰

To illustrate the difference between the extended baseline and the U.S. rate population target, we also extended the growth-slowing forecast based on the U.S. rate to 2050. Under the U.S. rate scenario, the region's share remains at 1.07 indefinitely, and the forecast for 2050

¹⁰ U.S. Census Bureau, Population Division, Population Estimates Program, "Annual Projections of the Total Resident Population as of July 1: Middle Series," February 2000. More detail about the U.S. forecast, the region's growth rate, and the 2050 forecast extension is in Appendix B.

is 4,320,500. The population in 2050, assuming that the region grows at the same rate as the U.S., is over 600,000 less than the extended baseline population in 2050, but still exceeds the baseline 2020 forecast by nearly 500,000 people. Even if we grow at the same rate as the U.S. for the next 50 years, we likely face a population of over four million some time in the future.

OUTLINE OF THE STUDY

The core of this study is presented in the next three sections. Section II contains impact simulations of policies designed to slow regional growth. Each analysis begins with an overview of the policy, outlines the simulation, and then presents significant impacts. Some of the challenges and limitations the region would face if the policy were implemented are also presented. Despite various methods of implementation, all of the growth slowing policies available to local government fall into one of three categories: 1) policies that limit housing, 2) policies that limit the economy's capacity to accommodate growth, and 3) policies that target public expenditures.

A discussion of family planning programs and international migration policy is also included in Section II. These policies are either not available to local governments or, in the case of fertility, not under the direct control of any level of government.

Section III provides background information on growth slowing policies, and expands the discussion of policies simulated in Section II. It also discusses urban growth boundaries, and concludes with an overview of local factors that encourage growth and reduce the effectiveness of growth slowing policies.

Section IV examines the region's population and economic growth over the last 20 years and summarizes SANDAG's 2020 Regionwide Forecast and the extended baseline forecast through 2050. The section examines the historical and forecast relationships between population, housing, labor force, and employment.

Section V concludes the study, providing an overview of key implementation issues the region will face if it chooses to slow growth, and emphasizing the role a Regional Plan can play in this matter. The region has an opportunity to shape its future, but it must first understand the forces that are causing growth and develop a strategy to address the impacts of growth. This study is intended to assist the region with these issues.

The appendices of the study are technical in nature, and include the calculations for the policy impact simulations. There is a detailed explanation of the assumptions used in both the 2020 Regionwide Forecast and in the simulations created for this study. A more detailed description of the derivation of the population target is also provided. Reports from the study's panel of experts and comments from the Citizen Review Panel and the public, and SANDAG staff responses, are also provided.

Section II

ANALYSIS OF LOCAL GROWTH SLOWING POLICIES

OVERVIEW OF IMPACT SIMULATIONS

This section provides an overview of the impacts associated with growth slowing policies available to local government. The focus of the impact analysis is on economic and demographic variables, although there is discussion of other topics including social equity, ecological environment, and traffic congestion. Growth slowing policies are designed to significantly slow the rate of growth in population, housing construction, or the economy below levels that would occur in an unregulated market.¹¹ Despite various methods of implementation, public policies available to local government that have the potential to influence growth can generally be divided into three main categories:

- Policies that limit the supply of housing;
- Policies that limit the capacity of the economy;
- Policies that target public expenditures.

We also discuss reform immigration policies and family planning programs.

An impact simulation compares a baseline projection to that of an alternative. In this study, the 2020 2-countywide Growth Forecast is the "baseline," against which a slower growth alternative will be compared. Different outcomes or growth paths result from different public policies being adopted. For example, a growth slowing policy may result in lower jobs than the baseline forecast, yet the unemployment rate for the baseline and the impact simulation is identical. How can unemployment be the same if there are fewer jobs? This can occur because the number of people in the labor force is also lower. The number of people in the labor force is different from the number of people in the population, and the number of people in the labor force is different from the number of people in the population.

SECTION II: ANALYSIS OF LOCAL GROWTH SLOWING POLICIES

¹¹ Eugene J. White, Jr., "The Growth of American Society: A new paradigm," *Journal of the American Planning Association*, Vol. 56, Spring 1990, pp. 1-12. American Planning Association, Chicago, IL.

Section II

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OVERVIEW OF IMPACT SIMULATIONS

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- Policies that limit the supply of housing.
- Policies that limit the capacity of the economy.
- Policies that target public expenditures.

We also discuss nation immigration policies and family planning programs.

An impact simulation compares a baseline projection against an alternative. In this study, the 2020 Regionwide Growth Forecast is the “baseline,” against which a slower growth alternative will be compared. Different outcomes, or growth paths, result from different public policies being in effect. For example, a growth slowing policy may result in fewer jobs than the baseline forecast yet the unemployment rate for the baseline and the impact simulation is identical. How can unemployment be the same if there are fewer jobs? This can occur because fewer jobs are an outcome of a particular policy that requires or allows less employment. Workers are not laid off if they never lived here in the first place. In this way, this study is different from many other impact analyses.

¹¹ Landis, John D. “Do Growth Controls Work? A new assessment.” *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL.

HOW THIS SECTION IS ORGANIZED

Although our research showed that it is not possible to stop population growth in regions like San Diego using public policies, the following simulations evaluate whether or not growth can be slowed.¹² The simulations provide an overview of the types of impacts the region could expect if it were to implement a growth slowing policy. Each simulation begins with an overview of the policy, illustrating why it could potentially be used to slow growth. Next, the simulation process and calculations are described, with an emphasis on the types of regional adjustments that reduce the effectiveness of the policy. The simulations conclude with a discussion of significant impacts and limitations to implementing each policy.

The first impact simulation in this section describes a policy designed to limit the supply of housing: a limit on the number of new housing units allowed. The next simulation is a policy designed to limit the economy's capacity: a limit on the amount of non-residential square footage. Although this policy attempts to address a primary source of growth, migration related to employment opportunities, it is less common than limits on housing.¹³

The third simulation describes policies that target public expenditures in an attempt to slow growth. By encouraging a certain form of economic development that requires fewer jobs, it may be possible to reduce population growth over time. The two policies are a regional payroll tax and changing the composition of employment growth through investment and public policy. We simulate the change in the region's job mix, and also provide a discussion of how a regional payroll tax might affect the San Diego region. Because it is unclear how payroll tax revenue will be used in the region, or who will benefit, we could not accurately simulate this policy.

The full set of impact results for all of the simulations is included in Appendix C of this study. In the course of our research, we evaluated combinations of growth slowing policies. Our simulations showed that not only were the policies ineffective individually, but they were also ineffective when used together. The section concludes with a discussion of family planning programs and international migration.

¹² Other studies have reported similar findings, including: 1) "Evaluation of No-Growth and Slow-Growth Policies for the Portland Region." Prepared for Metro by Eco Northwest, June 1994. 2) Landis, John D. "Do Growth Controls Work? A new assessment." *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL. 3) Glickfeld, Madelyn and Levine, Ned. "Regional Growth...Local Reaction: The enactment and effects of local growth control and management measures in California." *Lincoln Institute of Public Policy*: Cambridge, MA.1992. 4) Center for Continuing Study of the California Economy. "Land Use and the California Economy." A report for Californians and the Land, 1999. 5) Kolankiewicz, Leon and Beck, Roy. "Weighing Sprawl Factors in Large U.S. Cities." *NumbersUSA.com*, 2001.

¹³ Glickfeld, Madelyn; Fulton, William; McMurrin, Grant; and Levine, Ned. *Growth Governance in Southern California*. Claremont Graduate University Research Institute. October 1999.

RESTRICTIONS ON HOUSING

Policy Overview

The most common tool that jurisdictions adopt to slow growth is a restriction on the number of housing units. This is practical, because jurisdictions can directly control new housing through the permitting process, and housing and population are viewed as closely related. It seems logical that by restricting the number of homes in an area fewer people will be able to live in that area. A wide range of concerns influence the rationale for implementing housing restrictions, including a jurisdiction's ability to deliver services at an adequate level or a community's belief that housing growth is accommodating an unacceptable population growth rate.

Jurisdictions can restrict or discourage housing growth through a variety of mechanisms, including: annual quotas, development impact fees, Adequate Public Facilities Ordinances, and building moratoriums. Each of these growth slowing policies is described in more detail in Section III. Because the primary impact of these policies is to slow housing growth, each has similar secondary impacts. How much impact the policy has is influenced more by the extent of the restriction than by the shape of the specific policy. For example, a moratorium is more severe than an annual limit, since it prohibits all new development. As a result, a moratorium may cause a greater increase in average home prices than an annual limit because it reduces housing supply relative to demand to a greater extent.

In the simulation described here, the growth slowing policy is an annual limit on new housing units. The simulation assumes that trends observed between 1980 and 2000, when housing supply did not keep up with demand, continue if there is an explicit policy restricting housing supply. The simulation of this policy has been chosen because its impacts are representative of other policies that limit the supply of housing. Also, limiting annual units is the most direct way to affect the supply of housing. Other policies, such as increasing development impact fees, indirectly affect housing stock by increasing prices.

The Simulation

For the region's population to grow at the U.S. rate between 2000 and 2020, population growth would have to be 40 percent slower than in the baseline forecast. Would building 40 percent fewer housing units allow the region to reach the target?

In the baseline forecast, there are an average of about 17,300 housing units built annually between 2000 and 2020. Limiting annual housing construction by 40 percent would allow only 10,400 units annually. The 1,265,500 housing units in the region in 2020 would be 139,000 units less than the baseline housing forecast.

Estimating the growth-slowing potential of a policy that restricts housing requires an understanding of what adjustments are likely to occur if the policy were implemented. The most straightforward way to accommodate population growth is by building homes, but the region can also accommodate population growth through decreasing vacancy rates and

increasing household sizes. Job growth can even occur without population growth if workers are able to commute from outside the region's boundaries. In order to understand the magnitude of these adjustments, we utilized data from the 1980 to 2000 period.

The Housing Unit Shortfall, 1980 to 2000

There is a sufficient amount of evidence to prove a shortfall in housing construction in the region between 1980 and 2000. A recent study for the California Department of Housing and Community Development concludes that California "chronically under-produces housing, especially in coastal markets."¹⁴ In the San Diego region, low vacancy rates and price increases indicate a relative shortage of housing supply compared to demand. Also, the ratio of job and population growth to housing unit growth has increased, as relatively fewer housing units are built for each job created. Increased commuting from Baja California and Southwestern Riverside County also suggests a shortage of housing in the San Diego region.

The number of jobs in the region is increasing faster than the number of workers and the number of workers is increasing faster than the number of housing units. Between 1995 and 2000, wage and salary employment in the San Diego region increased 22 percent, the number of employed residents in the region increased 18 percent, and the number of housing units increased only five percent.¹⁵ During this time period, the region's housing growth did not keep pace with its job and population growth. In the 1970s, the region built 96 housing units for every 100 additional jobs. In the 1980s, 60 units were built for every 100 jobs added. In the 1990s, the ratio fell to 40 units for every 100 additional jobs.¹⁶

Another impediment to housing unit growth between 1980 and 2000 is California's current fiscal system. Having lost much of their control over tax rates and revenues, local governments are encouraged to accept new development that produces taxable sales, the largest revenue source for most jurisdictions. Under this financial pressure, cities are retreating from their responsibilities for accommodating the state's urban population growth. The effect of revenue on land use decisions, the "fiscalization of land use," leads to distorted public policy: the health of the municipal budget is mistaken for the community's economic prosperity; retail development is confused with economic development; and, the most important community need—housing—is regarded as a loser.¹⁷

¹⁴ State of California, Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*. May, 2000.

¹⁵ State of California, Employment Development Department, *Employment by Industry Estimates*, February 2001, and State of California, Department of Finance, *City/County Population and Housing Estimates*. May, 2000.

¹⁶ This change exceeds what we would expect based on observed trends in demographics and labor force participation rates, supporting the observation of a housing unit shortfall.

¹⁷ For more information on fiscal reform, refer to SANDAG, "Achieving Fiscal Reform in California." 1999.

Measuring the Housing Unit Shortfall and Regional Adjustments, 1980 to 2000

Increases in both interregional commuting and household size and decreases in the vacancy rate are regional adjustments that occur as a response to a housing unit construction shortfall.¹⁸ Changes observed between 1980 and 2000 in interregional commuting, household size and vacancy rate can be used to measure the size of the housing unit shortfall and to estimate the regional adjustments that occur when housing supply does not equal housing demand.

Interregional Commuting

Based on historic data on commuting and traffic volumes, we estimated that the number of workers who commute into the region increased from 27,000 in 1980 to 84,000 in 2000.¹⁹ Some of this increase is likely due to an overall employment increase, and may have occurred even without a housing shortfall. However, the increase is greater than expected, showing an accelerating trend toward interregional commuting. If the number of in-commuters had increased at the same rate as overall employment growth between 1980 and 2000 (82 percent) there would have been 50,000 in-commuters in 2000. We assume the additional 34,000 in-commuters are the result of the regional housing unit shortfall. At the 2000 ratio of employed residents per housing unit in the region (1.3), the additional 34,000 commuters would have required 26,000 housing units.

Because some workers are willing to endure longer commutes, growth policies that restrict the supply of housing may not impact job growth. Job growth without equivalent growth in housing encourages people to commute here to work from outside the region. To estimate the number of additional commuters under a housing shortfall, we divide the additional in-commuters (34,130) by the total housing unit shortfall (99,000 units, described below). This yields a ratio of 0.345. In other words, when housing supply does not meet housing demand, for every 1000 unit shortfall, 345 additional workers live outside of the region and commute here to work. This ratio is used to measure the impact of future restrictions on housing units on the level of interregional commuting.

¹⁸ State of California, Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*. May, 2000. And Myers, Dowell and Kitsuse, Alicia, "Development in Time: Planning the Future of California's Housing." Lincoln Institute of Land Policy Working Paper, 1999.

¹⁹ From 1980 and 1990 census data, and survey conducted by San Diego Dialogue at San Ysidro and Otay Mesa, 1992. Estimate for 2000 based on changes in estimated traffic volumes between 1990, 1992 and 2000 from *San Diego Region Average Weekday Traffic Volumes*, SANDAG, 2001.

Vacancy Rate and Household Size

According to the U.S. Census Bureau, vacancy rates fell from 7.0 percent in 1980 to 4.4 percent in 2000. A housing unit shortfall tightens the regional housing market and forces the vacancy rate downward. The 4.4 percent vacancy rate observed in the 2000 Census is lower than the vacancy rates throughout the baseline forecast (5.5 percent in 2000 and 5.6 percent in 2020).

If local public policies are enacted that restrict the supply of housing, vacancy rates may decrease even further. In fact, evidence from other California metropolitan areas suggests that vacancy rates can fall below three percent.²⁰ The 2.6 percentage point decrease observed between 1980 and 2000 is used in the simulation as a parameter limiting the vacancy rate decrease compared to the baseline forecast between 2000 and 2020.

Nationwide, the average number of persons per household (household size) fell from 2.75 in 1980 to 2.59 in 2000. In the San Diego region, household size increased from 2.62 in 1980 to 2.73 in 2000. The region has a younger population than the nation, and a higher share of international migration. However, even after controlling for these factors and other demographic changes (age, sex, and ethnicity), we still would have expected household size in 2000 to be at or below its 1980 level.²¹

If the region's household size and vacancy rate had remained at their 1980 levels, the region would have needed to build 73,000 additional units over the 20-year period to accommodate its estimated 2000 population. Without the interregional commuting, household size, and vacancy rate adjustments, the region would have needed to build an additional 99,000 housing units between 1980 and 2000 (26,000 related to increased interregional commuting and 73,000 related to household size and vacancy rate changes).

Although household size is a function of many variables, including demographics, income, cultural norms, and housing affordability, public policies that limit the supply of housing will likely cause household size to increase even further. To estimate the impact of a policy that restricts the supply of housing, the increase of 0.11 persons per household observed between 1980 to 2000 is used as a parameter limiting the household size increase compared to the baseline forecast between 2000 and 2020.

Housing Prices

Growth policies that restrict the supply of housing without addressing the demand for housing will cause prices to increase. To estimate the price impact of a housing shortfall, we

²⁰ The 2000 Census reported vacancy rates near three percent in several Bay Area counties, including Santa Clara (2.3%), San Mateo (2.5%), Contra Costa (2.9%), Solano (3.1%), and Alameda (3.1%).

²¹ This finding is based on applying 1980 household formation rates to the 2000 population. With no change in household formation rates, aging of the population (which contributes to lower household size) plays a greater role than increasing ethnic diversity (which contributes to higher household size). The share of children under 18 was the same in both years (26 percent).

calculated an elasticity measuring the percent change in housing prices from 1980 to 2000 (adjusted for inflation), divided by the percent shortfall in housing units from 1980 to 2000.

We acknowledge that the homes occupied by workers outside of the region are satisfying part of the region's demand for housing. Therefore, we estimated the home price elasticity using the 73,000 units that would have been needed if the region's vacancy rate and household size had not changed, rather than the entire 99,000 unit shortfall (which includes the interregional commute adjustment). Between 1980 and 2000, the average price of an existing detached single family home increased 17.4 percent and the percent shortfall in housing units was 6.5 percent.²² The elasticity developed from this relationship (2.668) means that for every one percent shortfall in housing units, home prices increase 2.7 percent.

Regional Adjustments to a Policy Restricting Housing, 2000 to 2020

The parameters developed above in "Measuring the Housing Unit Shortfall and Regional Adjustments, 1980 to 2000" enable us to estimate the effects of a policy that reduces the supply of housing between 2000 and 2020.

Interregional Commuting

In our simulation of a policy limiting annual housing unit construction, the region builds 139,000 fewer units than in the baseline. Applying the commuter to housing unit ratio, the number of additional in-commuters related to this housing unit restriction is 47,900 (0.345 commuters multiplied by 139,000 units).

The ratio of population to labor force in the baseline forecast in 2020 is 1.99. Applying this ratio to the number of additional commuters yields a total of about 95,000 people who live beyond the region's political boundaries instead of within them (47,900 multiplied by 1.99).

Vacancy Rate

Although the policy results in 139,000 fewer units, there are only 96,000 fewer households compared with the baseline forecast because the region's vacancy rate will decrease. In the baseline forecast, the vacancy rate is 5.5 percent in 2000 and is relatively stable throughout the forecast period. Under a policy restricting units, the vacancy rate may decrease by 2.6 percentage points, similar to the 1980 to 2000 time period. This results in a 2020 vacancy rate of 2.9 percent in the simulation.

²² Although the average home price is only one of many ways to measure housing prices, it is a stable historical series that is also used in the baseline forecast, and is used in the simulation as a proxy for overall housing costs. The housing price estimate is published semi-annually in the San Diego Regional Chamber of Commerce, *Economic Bulletin*.

Household Size

The numeric change in household size that was observed between 1980 and 2000 in the San Diego region is used to establish the limit of the household size adjustment under the policy. Although average household size in the baseline forecast decreases from 2.84 in 2000 to 2.81 in 2020, a policy restricting the number of housing units would cause household size to shift in the opposite direction, increasing instead. Household size in the simulation increases by 0.11 persons between 2000 and 2020, reaching 2.95 in 2020.²³

Population and Employment

Due to the adjustments in household size and vacancy rates, reducing housing unit growth by 40 percent only results in 11 percent less population growth (101,800 fewer persons) within the region between 2000 and 2020. However, the increase in the number of workers and their families who live outside the San Diego region and commute here to work accommodates most of the difference between the simulation and the baseline forecast. Therefore, overall population growth slows by less than one percent (6,300 fewer persons) if the “greater region,” including adjacent areas is taken into account. Employment growth does not slow at all.²⁴ A comparison of the baseline and the housing unit restriction policy in the year 2020 is shown in Table 1.

Housing Prices

The policy restricts housing unit growth within the region by 139,000 units. However, the homes occupied by the additional commuters from beyond the region are satisfying part of the region’s demand for housing. They are subtracted from the housing unit shortfall for the purpose of calculating the response of home prices to the policy. Acknowledging the 39,000 housing units occupied by additional commuters from beyond the region (47,900 commuters divided by the 2020 forecast of 1.23 employed residents per housing unit), housing supply falls short of housing demand by 100,000 units. Applying the elasticity of 2.668 to the 7.1 percent shortfall (100,000 divided by the baseline forecast of 1,404,200), the average price of an existing detached single family home in 2020 would be 19 percent higher than the baseline. In the simulation, the average price of a single family home is \$441,500, compared to the baseline forecast of \$371,100. Both figures are expressed in 2000 dollars.

²³ Because the simulation is designed to be comparable to the baseline forecast, the household size used for the year 2000 is from the forecast (2.84), not from the 2000 census (2.73).

²⁴ In this simulation, civilian employment is the same as in the baseline forecast. Although the “greater region” will not experience a loss of jobs between 2000 and 2020, it is possible that some of the population-serving jobs (such as retail, government, or construction) may move beyond the San Diego region’s political boundary due to the commuting adjustment.

Table 1
2020 Summary Information for Housing Unit Restriction

	Baseline	Policy	Difference
Population	3,853,300	3,751,500	-101,800
Housing Stock	1,404,200	1,265,500	-138,700
Household Size	2.81	2.95	0.14
Residential Vacancy Rates ¹	5.6%	2.9%	-2.6%
Civilian Jobs	1,627,800	1,627,800	0
Commuters into Region	143,300	191,200	47,900
Per Capita Income ²	\$34,100	\$34,100	\$0
Avg. Home Price ²	\$371,100	\$441,500	\$70,400
Ratio of Home Price to Income ³	3.87	4.39	0.52

¹ Comparable to the census vacancy rate, not a market vacancy rate. For more discussion of residential vacancy rates, see Appendix A.

² Inflation-adjusted 2000 dollars.

³ Ratio of average home price to average income per household. Historical peak in 1990 at 4.09.

Sources: SANDAG 2020 Regionwide Forecast, July 1998; Policy simulations, SANDAG, 2001.

Impacts

Population

Under a policy restricting housing units, population growth in the “greater” San Diego region will decrease by only one percent from the baseline forecast between 2000 and 2020. The greater region includes all 19 jurisdictions in the region and adjacent areas in Baja California and neighboring counties. The result of this simulation is consistent with a recent study, which states that local growth measures had no significant impact on overall population growth rates in California from 1988 to 1992. They did, however, play an important role in the geographical distribution of the growth.²⁵

Interregional Commuting and the Jobs Housing Balance

Policies that reduce housing within one political jurisdiction shift growth to other jurisdictions. If the San Diego region restricts construction of new housing units, neighboring areas in Baja California or southwestern Riverside County will likely absorb an increasing portion of this region’s housing growth. In fact, this is already occurring. A recent survey of Temecula and Murrieta residents stated that 68 percent of residents worked outside of the

²⁵ Glickfeld, Madelyn; Fulton, William; McMurrin, Grant; and Levine, Ned. “Growth Governance in Southern California.” Claremont Graduate University Research Institute. October, 1999.

two cities.²⁶ Of those residents commuting out of the area, 37 percent commute to the San Diego region for work.

As discussed earlier, the San Diego region's growth in housing did not keep up with growth in population and employment. The economy has been expanding despite relatively slow growth in the housing stock, contributing to a shortage in available, affordable units. Increasing housing prices, longer commutes, and larger household sizes are evidence of individuals adapting to the imbalance between job growth and housing growth. This imbalance may eventually limit the region's ability to add specific kinds of jobs or force them to surrounding areas, but current experience shows that population and job growth can continue to occur even without equivalent growth in housing. For example, the Silicon Valley area in Northern California has experienced rapid job growth with very little growth in housing for a number of years. To a lesser extent, the San Diego region has also experienced a number of years of population and employment growth outpacing growth in housing.

Workers have the option of living outside the region's politically defined boundaries, so limiting housing construction results in slower population growth within the region. However, if the growth is pushed to areas adjacent to the region's political boundaries many of the impacts of that growth still occur within the region. The region retains all of the forecast employment growth but more workers and their families would live outside of the region's political boundaries (95,500 residents). This would likely increase the imbalance between jobs and housing in the region and cause people to commute longer distances than they would have in the absence of the policy; traffic congestion and air quality will suffer. Watersheds, air basins, natural resources and transportation corridors are shared among the region and its neighbors. Furthermore, people who commute here to work use our roads, water and other infrastructure even though they might not be contributing as much as local residents. People who reside outside the region and work here may be paying less for local infrastructure and services because they pay property and sales taxes in other jurisdictions.

The impacts of increased commuting will be unequally distributed among the region's neighborhoods and place a burden on specific groups of individuals and families. In particular, congestion will increase on major freeways that serve as arterials for neighboring communities, including Interstates 5 and 15. First-time homebuyers are hardest hit by housing shortfalls and price increases, and they experience the largest increases in commute time. In 1985, median commute time for all recent homebuyers, including first-time homebuyers, was 20 minutes. By 1995, median commute times increased to 25 minutes for all recent homebuyers and to 31 minutes for first time homebuyers.²⁷

²⁶ City of Temecula and City of Murrieta, "Job Skills and Commuter Census." 1998. Available at www.ci.temecula.ca.us.

²⁷ State of California, Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*. May, 2000.

Additional Residents in Existing Housing Units

Reducing the supply of housing units without reducing the demand for more housing can cause an increase in average household size and a decrease in vacancy rates. Even if most households do not add people, average household size can increase if some households are overcrowded. "In the short term, overcrowding tracks with in-migration. In the longer term, it tracks with housing cost burdens and production shortfalls."²⁸

In the simulation, household size in 2020 is 2.95, compared with 2.81 in the baseline forecast. This difference of 0.14 persons would occur if just one out of every seven households added an additional resident. Put another way, about 170,000 additional residents are accommodated by this adjustment in household size.

Even if the interregional commute adjustment did not take place, the entire baseline forecast could be accommodated with 139,000 fewer units if the average household size rose to 3.12. Many neighboring areas of Southern California and Baja California have already attained household sizes near or exceeding 3.12, as shown in Table 2.

Table 2
Average Household Size in 2000

Southern California Counties		Baja California Municipios	
Imperial	3.33	Ensenada	3.99
Los Angeles	2.98	Mexicali	4.00
Orange	3.00	Playas de Rosarito	4.08
Riverside	2.98	Tecate	4.06
San Bernardino	3.15	Tijuana	4.12
San Diego	2.73		
Ventura	3.04		

Sources: U.S. Census Bureau, *Census 2000*, and National Institute of Statistics, Geography and Informatics, 2000 Census.

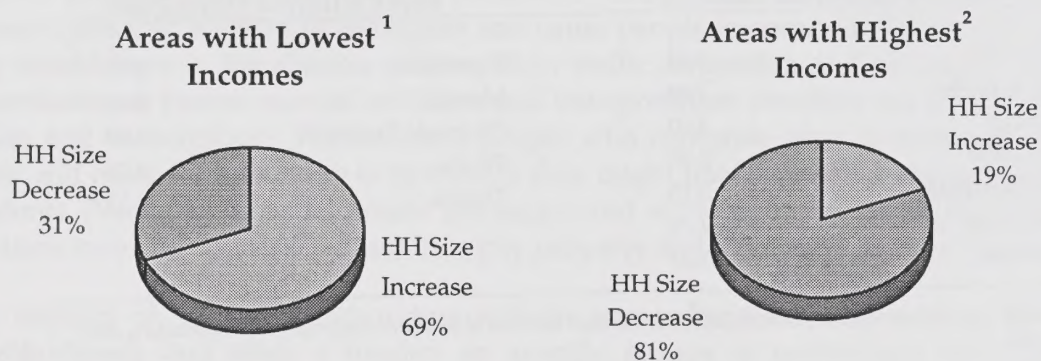
Population growth that occurs without comparable housing unit growth throws a monkey wrench into the planning process because of the unpredictability of where and how much growth will occur. A jurisdiction can influence the location and density of housing units through its general plan and zoning regulations, coordinating the infrastructure and public services needed to serve the expected population. Larger household sizes result in unexpected population increases in places where there are no additional housing units, so jurisdictions may be unaware of population increases until impacts such as increased school enrollment, and traffic and parking congestion become apparent. Also, since impact fees from new housing units are used to fund school construction, school districts will face enrollment growth without an important source of revenue.

²⁸ State of California, Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*. May, 2000.

"Shortfalls in meeting housing needs in a timely way will surely lead to numerous adjustments and disruptions, including renewed surges in housing prices and rents, increased doubling up of grown children and parents, and other undesirable repercussions likely to adversely affect life in California for all residents."²⁹

Even though most households may not need to double up or take in extra residents, the impacts of adding people at a faster rate than housing will be felt by everyone who uses roads, schools, parks, libraries, and other public facilities. Also, the spatial distribution of overcrowding may be uneven and unpredictable, causing some neighborhoods to experience greater impacts than others. While the overall increase in average household size may be modest, crowding will be concentrated among new entrants to the housing market such as immigrants, young adults, and low income residents. Figure 2 illustrates differences in household size trends for the parts of the region with the lowest and highest incomes. In more than two-thirds of the region's lowest income census tracts, average household size increased between 1990 and 2000, but fewer than one in five of the highest income census tracts had increases in household size.

Figure 2
Impact of Income on Change in Household Size, 1990 to 2000



¹ Lowest quartile of median household income among 1990 census tracts. These tracts had median household incomes below \$27,700 in 1989.

² Highest quartile of median household income among 1990 census tracts. These tracts had median household incomes above \$45,900 in 1989.

Sources: U.S. Census Bureau, 1990 and 2000 Censuses.

²⁹ Myers, Dowell and Kitsuse, Alicia, "Development in Time: Planning the Future of California's Housing." Lincoln Institute of Land Policy Working Paper, 1999.

In addition to increasing household size, vacancy rates in the simulation fall to 2.9 percent in 2020. A constrained supply of housing increases landlords' ability to charge higher rents, and reduces housing affordability. Because low-income households pay a greater proportion of their income for housing, they will be disproportionately burdened by the policy.

General and community plans developed by each jurisdiction include an explicit or implicit (based on planned land use and residential density) housing unit capacity. The ability to regulate housing units may imply that the region can enforce a "carrying capacity" related to an ultimate population target. However, the plans only regulate structures, and cannot determine the number of people living in them. The household size adjustment described above shows that the region can accommodate more population growth than planned. For this reason, even if the region agreed upon and set a carrying capacity, we would not be able to enforce it.

Housing Prices and Income

Under the simulation, the average price of an existing detached single family home in 2020 would be \$441,500, or 19 percent higher than the baseline forecast of \$371,100. Both figures are expressed in 2000 dollars. The average housing price to average household income ratio of 4.39 under the policy exceeds its 1990 peak of 4.09, when housing was less affordable than at any time in the region's recent history.

Growth policies that restrict the supply of housing relative to demand will allow sellers to charge higher prices. If developers are forced to compete for a scarce number of permits, they may have to include amenities or other improvements that further increase the cost of the home.³⁰ "Empirical studies of the price effects of local growth control, most of them done in California using housing sales data from the 1970s and early 1980s, suggest that controls can add as little as two percent or as much as 35 percent to the price of housing, depending on the community and the severity of restrictions."³¹ The change in housing price that occurs in this simulation falls within this range.

Buying a home is already an unattainable goal for many local residents; restricting housing makes the situation even worse. The San Diego region already is among the least affordable housing markets in the nation. Among 177 metropolitan areas, the San Diego region ranked 169th in housing affordability. A family earning the U.S. median income can afford to buy 58 percent of the homes sold nationwide. A family earning the median income in the San Diego region can afford to buy fewer than 25 percent of the homes sold in the region.³²

³⁰ Fulton, William. *Guide to California Planning: Second Edition*. Solano Press Books, Point Arena, California 1999

³¹ Fischel, William. "What do Economists know about Land Use controls?" Lincoln Institute of Land Policy. Cambridge, MA. 1990.

³² National Association of Home Builders' Housing Opportunity Index (HOI). The HOI is a quarterly measure of the percentage of homes sold that a family earning the median income can afford to buy. The HOI for July through September of 2000 ranked 177 metro areas on the basis of 740,000 recorded home sales for a nationwide

Per capita income remains unchanged from the baseline forecast in this simulation. Under a policy restricting housing, it is possible that income will be higher than in the baseline forecast, because the San Diego region maintains baseline levels of employment growth while reducing population within its political boundaries. Also, the residents who remain in the region under this policy are those who are able to afford more expensive housing. However, higher housing prices do not themselves contribute to income levels, and the additional rise in per capita income beyond the baseline forecast is unclear.

Employment

Because there are no restrictions on employment growth in this scenario, the region should not experience a significant reduction in total jobs in 2020 compared to the baseline. Nevertheless, certain types of jobs may be lost and some sectors in the economy could be affected. This is especially true during the first several years of the policy, when the region is forced to adjust to a government imposed limitation on the local housing market.

The construction industry would likely be the first to feel the effects of a limitation on the region's housing supply. However, over time the effects on the economy will stabilize as employees in the construction industry either leave the region, find another line of work, or simply adapt to the policy by specializing in other types of construction activity, such as remodeling or non-residential development. Furthermore, under the simulation annual residential construction is only reduced 40 percent below the baseline forecast, to 10,400 units per year. While this is below the baseline, residential construction activity does not stop completely.

Limitations to Implementation

Equity

Any policy designed to restrict housing construction will make housing less affordable. Increases in the average price of housing may be attractive to homeowners, but not for home purchasers and renters. The San Diego region is already unaffordable compared to the rest of the nation, and a policy that knowingly encourages this trend is problematic. The policy will affect current residents as well as newcomers, making it harder for young families and first time buyers to afford a home.

According to the National Association of Home Builders, "home equity accounts for more than half (51 percent) of the total net wealth of the typical home owning family."³³ Increasing wealth for homeowners while limiting opportunities for others to become homeowners

score of 58.1. San Diego's HOI is 25.1. Springfield, Illinois had the highest affordability rating (89.6), while San Francisco, CA had the lowest (5.7). Rankings for other California areas include Ventura County (34.6), Orange County (36.1), Riverside/ San Bernardino Counties (50.8), and Sacramento County (46.7).

³³ "Homeownership: Strength of the Nation." National Association of Home Builders. Available on line at http://www.nahb.com/housing_issues/strength.htm

causes the distribution of wealth in the region to be increasingly polarized. As previously shown, other negative impacts including overcrowding and longer commutes are also unequally distributed among residents. New arrivals to the region, young adults, and low income residents will bear the greatest burden of these impacts.

Administration

Local jurisdictions are responsible for issuing building permits, so it is possible to reduce the number of permits as a public policy. Doing so would require the region's 19 jurisdictions to collectively agree on the policy, and technical issues of how to allocate the permits among the jurisdictions would have to be resolved. Other complications include meeting state requirements for affordable housing, and whether to "bank" unused permits in years of slower growth. With likely disagreement about whether the policy is working to slow growth, and whether the negative impacts of the policy outweigh the positive impacts of slowing growth, the policy will be subject to ongoing challenge in the political and legal arenas. These technical limitations have not prevented California jurisdictions from enacting housing limits, but these limits have not been attempted at a regional level.³⁴

Effectiveness

The policy simulation asked the question "would 40 percent fewer housing units allow the region to reach the population target?" The answer is no, based on the results of the simulation. Due to the interregional commute adjustment, population growth between 2000 and 2020 slowed by 11 percent within the region's political boundaries. That growth was merely pushed to adjacent areas. Even with fewer housing units, virtually all of the forecast population growth can be accommodated through a combination of additional interregional commuting and increasing household size. In fact, without any adjustment for interregional commuting, all of the region's baseline population growth could be accommodated with 139,000 fewer housing units and a household size of 3.12 in 2020, which would be comparable with household sizes in other parts of California.

³⁴ Nine percent of local planning officials in California in 1998 and 1999 answered yes to the question "Do your city's policies include a limit on the total number of HOUSING/RESIDENTIAL units authorized for construction in a given year?" Results are published by the Public Policy Institute of California, "Residential Development and Growth Control Policies: Survey Results from Cities in Three California Regions." July, 2000.

RESTRICTIONS ON THE ECONOMY

Policy Overview

On the surface, it seems that by restricting the amount of employment space available, fewer businesses will be able add jobs or locate in the region. This policy is also appealing because it potentially addresses a source of regional population growth: domestic migration related to employment opportunities. Restricting the region's ability to accommodate employment growth should slow job growth, thereby slowing population growth.

Despite the apparent potential to slow growth, fewer communities have adopted restrictions on office, commercial and industrial space than restrictions on housing.³⁵ There are several important reasons: local governments depend on sales tax revenue from commercial development; economic development agencies encourage industrial and office developments that bring additional jobs to a community; and the connection between job growth and population growth is less obvious than the connection between housing and population. Local concern about non-residential development is usually related to immediate impacts such as traffic congestion in the vicinity of specific developments, rather than the long-term issue of the relationship between population growth and development.

There are several policies that jurisdictions can use to restrict non-residential construction, including annual limits on new construction, development impact fees, Adequate Public Facilities Ordinances, floor area ratios, and other zoning restrictions. Growth slowing policies that focus on the economy are described in more detail in Section III.

The Simulation

The simulation described here is an annual limit on non-residential square footage. This policy was chosen to simulate because the impacts are similar to those of other policies limiting the capacity of the economy, and because it is the most direct approach to reducing the supply of employment space. For example, other policies indirectly reduce the growth in employment space by increasing fees or requiring developers to make additional investments before building.

Non-Residential Space

The average employment density in the region, calculated by dividing non-agricultural wage and salary employment (1,159,300) by occupied employment space (355,540,500 square feet), was 3.3 employees per 1000 square feet in the year 2000. To estimate the amount of additional employment space the region will need in 2020 we multiplied the current employment density (3.3 employees per 1000 square feet) by non-agricultural wage and

³⁵ Glickfeld, Madelyn; Fulton, William; McMurrin, Grant; and Levine, Ned. Growth Governance in Southern California. Claremont Graduate University Research Institute. October 1999.

salary employment growth (314,400 jobs) in the baseline forecast. This results in demand for 101.6 million additional square feet of employment space between 2000 and 2020, or 5.1 million square feet annually.

Keeping in mind the target of 40 percent less population growth between 2000 and 2020, would a 40 percent reduction in the growth of employment space achieve the population target? This policy limits the increase in non-residential square footage to 40 percent below the baseline increase (101.6 million square feet). Under this policy, the region could add 3,047,000 square feet of employment space annually, or 60.9 million square feet over twenty years. The total occupied square footage in 2020, 435.3 million, is nine percent less space than in the baseline forecast.

Similar to adjustments that occur with restrictions on housing unit construction, the regional economy will also adjust to and weaken a restriction on non-residential construction by lowering the non-residential vacancy rate and increasing employment densities.

Non-Residential Vacancy Rate

The amount of employment space that currently exists in the San Diego region is approaching 400 million square feet.³⁶ Using a weighted average of market vacancy rates for office, industrial, and retail space, the overall vacancy rate for non-residential buildings was five percent in the fourth quarter of 2000.³⁷ The amount of space that is actually unoccupied is probably higher than the market vacancy rate, because some space may be leased but not occupied, and buildings owned and occupied by a single user may have space for future expansion that is not available for lease. With a restriction on new construction, firms would occupy more of the existing space.

Modified prices would keep vacancy rates from falling below very low levels. A parameter based on historical rates from other metropolitan areas sets a “floor” vacancy rate of three percent for this simulation.³⁸ In markets where vacancy rates fall below three percent, lease rates begin to increase rapidly. Rapidly increasing lease rates act as an equalizer, causing dislocation and forcing some businesses to leave the area. Expensive lease rates and business flight then drive vacancy rates back to three percent or higher.

³⁶ The estimate used for the simulation is 374.4 million square feet in 2000, including buildings larger than 100,000 square feet from an inventory maintained by John Burnham and Company, and smaller buildings from the MetroScan database maintained by First American Real Estate Solutions. The Burnham inventory does not include some larger buildings such as hospitals, hotels, and government buildings. In addition, buildings under construction or approved but not built are not included in the total.

³⁷ CB Richard Ellis, *Local Market Reports, San Diego County, Q4 2000*. Specific vacancy rates were: office 3.6 percent, industrial 8.5 percent, retail 2.9 percent. Also, in this simulation, the vacancy rate refers to physically vacant space, not necessarily available space. Some space may be rented but unoccupied.

³⁸ The “floor” vacancy rate of three percent is based on observations of CB Richard Ellis *Local Market Reports, 2000* data for major metropolitan areas. Comparing markets with low vacancy rates to those with high vacancy rates, we found that lease rates begin to increase rapidly once vacancy rates tighten to three percent or below.

Employment Density

The region has the potential to accommodate significant employment growth in existing buildings by increasing the number of employees in existing occupied space. Increased density would be a logical response to a restriction on non-residential construction, especially if we consider the shift towards higher density, increasingly office-based uses seen in the modern, "information" economy.

To develop a parameter for how much employment density could rise in response to a restriction on space, we analyzed a range of observed densities by building type in the San Diego region. As noted previously, the 2000 average employment density in the region is 3.3 employees per 1000 square feet. As shown in Table 3, the unweighted average of the observed densities for selected building types in the region is 3.2 employees per 1000 square feet, similar to the current regional average.

Table 3
Employment Densities for Selected Building Types

Building Type	Employees per 1000 sq. ft.		
	Low ¹	Average ²	High ³
Industrial/R&D Park	1.4	3.4	4.7
Office High Rise	4.3	4.6	5.0
Office Low Rise	3.8	4.8	5.4
Single Company Office Building	2.3	2.7	3.7
Medical Office Building	3.7	4.2	4.5
Community Shopping Center	1.4	1.7	2.1
Neighborhood Shopping Center	1.8	2.8	3.1
Hotel (non-resort)	0.6	1.1	1.4
<i>Unweighted Average, all types</i>	2.4	3.2	3.7
<i>Density Adjustment Parameter⁴</i>			18.2%

¹ The lowest observed value from survey for each building type.

² The average observed value from survey for each building type.

³ The highest observed value from survey for each building type.

⁴ This parameter is calculated by dividing the percent difference of the average of the highest density (3.738) by the average of the average density (3.163) for each building type. An increase of 18.2 percent means that buildings are occupied at the highest density in its observed range.

Source: SANDAG, San Diego Traffic Generators, 1990. Cited in SANDAG, 2020 Cities/County Forecast Technical Documentation, Volume III, December 1998.

We could not locate any information that discusses the change in employment density in response to restrictions on employment square footage.³⁹ Therefore, we imposed a ceiling parameter on the maximum allowable increase in employment density, based on historical observations by building type. In this simulation, average employment density is not allowed to increase by more than 18.2 percent, as shown in Table 3. An increase of 18.2 percent would assume that all buildings would be occupied at the highest density within their observed range.

Population and Employment

Because of the decrease in non-residential vacancy rates and increase in employment density, the policy does not slow population or employment growth between 2000 and 2020. Table 4 provides 2020 summary information for the baseline forecast and non-residential policy simulation. Because this policy does not slow population or job growth or affect housing supply or demand, most of its outcomes are the same as in the baseline forecast. Even though this policy does not reduce population and jobs, it may have some undesirable impacts, as described below.

Table 4
2020 Summary Information for Restriction on
Non-Residential Development

	Baseline	Policy	Difference
Population	3,853,300	3,853,300	0
Housing Stock	1,404,200	1,404,200	0
Household Size	2.81	2.81	0
Residential Vacancy Rate ¹	5.6%	5.6%	0.0%
Civilian Jobs	1,627,800	1,627,800	0
Commuters into Region	143,300	143,300	0
Per Capita Income ²	\$34,100	\$34,100	\$0
Average Home Price ²	\$371,100	\$371,100	\$0
Ratio of Home Price to Income ³	3.87	3.87	0.00
Non-Residential Vacancy Rate	5.0%	3.0%	-2.0%
Employees Per 1000 Square Feet	3.3	3.5	0.2

¹ Comparable to the census vacancy rate, not a market vacancy rate. For more discussion of residential vacancy rates, see Appendix A.

² Inflation-adjusted 2000 dollars.

³ Ratio of average home price to average income per household. Historical peak in 1990 at 4.06.

Sources: SANDAG 2020 Regionwide Forecast, July 1998; Policy simulations, SANDAG, 2001.

³⁹ SANDAG and the American Planning Association's (APA) Planning Advisory Research service were unable to identify any literature that measured the response in employment density per square foot to a restriction on employment space.

Impacts

Non-Residential Density

This simulation does not show a loss in overall employment compared to the baseline forecast. The region can accommodate all baseline employment growth because of increasing employment density. The density adjustment needed to accommodate the baseline employment growth is seven percent, which takes into account the 40 percent reduction in vacancy rates from five percent to three percent based on the parameter discussed above. This increase from 3.3 to 3.5 employees per thousand square feet (one worker for every 5000 square feet of existing space) is within the range of current densities shown in Table 3. In fact, even if no space were allowed except for what is already in the pipeline, all forecast employment growth could be accommodated with a 17 percent increase in employment density (from 3.3 to 3.8 workers per 1000 square feet, adding one worker for every 2000 square feet of space). This is below the maximum adjustment of 18.2 percent.

Impacts of increasing employment density are largely dependent on the ability of infrastructure to accommodate the additional activity. For example, traffic and parking congestion in certain places may worsen. However, increasing density also helps to conserve open space, and increases the potential to serve employment centers with transit.

Vacancy and Lease Rates

Limiting the amount of available employment space without reducing demand will decrease vacancy rates and increase regional lease rates. In the simulation, vacancy rates fell 40 percent, from five percent to the “floor” rate of three percent. The low vacancy rate limits the amount of employment space options available to local businesses.

Lease rates will increase because the supply of employment space has been reduced relative to demand because there is no employment loss. This will reduce the region’s competitiveness, but lease rates are unlikely to increase enough to significantly slow employment growth between 2000 and 2020. The industries that drive the region’s growth are often those able to afford higher lease rates. Furthermore, the San Diego region’s current lease rates are relatively low compared to other major metropolitan areas in the nation, and office space in the region is half as expensive as some of the nation’s leading markets.⁴⁰ Therefore, lease rates could rise and the region would still be competitive with other areas.

⁴⁰ CB Richard Ellis. “Global Market Rents” July 2000. Total occupation costs in US dollars per annum were \$32.12 per square foot for the San Diego region. The most expensive areas include San Jose/Silicon Valley (\$87.48), the San Francisco Central Business District (\$73.75), midtown Manhattan (\$64.63), and Boston Central Business District (\$55.36). Other markets more similar to San Diego include Seattle Central Business District (\$40.47), Seattle suburban (\$28.94), Austin (\$30.97), Oakland-East Bay (\$43.32).

Due to insufficient historical data, we could not accurately estimate a regional lease rate in 2020.⁴¹

Business Expansion and Relocation

In the same way that employees could find housing outside the region in the face of housing restrictions, non-residential building restrictions might provide an incentive for businesses to move or expand beyond the boundaries of the San Diego region. This impact could occur if conditions in the region became inhospitable enough, both economically and in terms of quality of life, to push employment to other areas. The simulation does not suggest this will occur over the twenty year forecast period, but it is a possible reaction to the impacts associated with this type of policy.

In fact, areas adjacent to the San Diego region are actively seeking to expand their economic base. According to a recent study for the City of Temecula, “Temecula’s emergence as a center of job growth is primarily the result of the migration of firms and people to the Inland Empire from the Southland’s coastal counties. The major impetus for the growth is coming north out of San Diego County, not from Orange or Los Angeles counties. Firms have leapfrogged many miles of undeveloped land to locate within Temecula’s borders. The jobs coming to the City are better paying than the Inland Empire average.”⁴²

Throughout California, metropolitan economies are expanding and linking with other regions to previously unimaginable extents. The Central Valley east of the San Francisco Bay Area, and the “Inland Empire” east of Los Angeles are feeling the growth pressure of neighboring job centers. The City of Tracy (located 55 miles east of Silicon Valley) is now developing growth control and management strategies of its own, as is the City of Temecula.

Income and Employment

Under this simulation, a significant finding is that there is no loss of per capita income or employment from the baseline forecast in 2000. A restriction on employment space may impact some industries more than others, particularly construction or industries that require large facilities. However, the effects are likely greatest during the first several years of the policy and over time the economy will adjust. Furthermore, under the simulation annual non-residential construction is only reduced 40 percent below the baseline forecast, to 101.6 million square feet per year. While this is below the baseline, construction activity does not stop completely.

⁴¹ This simulation assumes that most businesses make the choice to remain in the region, despite the restriction on employment space. It is possible that some businesses will leave, although our simulation suggests that new firms would replace them.

⁴² Husing, John. “The Husing Report, 2000: Demographic, Economic, Quality of Life Data.” City of Temecula Web site. Document available online at www.cityoftemecula.org.

Limitations to Implementation

This simulation showed that a policy designed to reduce the economy's capacity to accommodate growth will be ineffective. Because of the region's ability to accommodate employment in existing space, population and employment growth will be unchanged from the baseline. To date, there have been no attempts to restrict a region's economy from growing, and any effort is risky and uncertain. Because local governments have very little experience restricting economic development, little is known about the potential secondary impacts of implementing a restriction on employment space, beyond theory and simulations such as this one. Finally, recall that even if no space were allowed except for what is already in the pipeline, all forecast employment growth could be accommodated with a 17 percent increase in employment density (an increase below the 18.2 percent parameter described above).

TARGETING PUBLIC EXPENDITURES

Until now, this study has focused on policies that attempt to slow growth either by limiting housing or the economy. The region could also target its public expenditures to encourage a form of economic development that does not require as much population growth. This study presents two policies available to local government to accomplish this: 1) changing the composition of the job mix public investment; and 2) imposing a regional payroll tax.

Obviously, these policies differ in form; changing the job mix redirects public funds while a payroll tax collects additional revenue for the region. However, the goal of both of the policies would be the same: reduce population growth through targeted public expenditures. The policies are similar because the investments benefit the region's economy and, potentially, improve its quality of life. Each of the policies is described in greater detail below.

Policy Overview: Changing the Region's Job Mix

To our knowledge, no jurisdiction or region has explicitly attempted to slow population growth by changing the job mix of the local economy. Because this policy is unique, we first provide the rationale behind the policy. This is followed by a discussion of how targeting public expenditures toward high value-added jobs has the potential to slow population growth. The changing job mix simulation is then presented in the same format as the other simulations.

The basis for changing the job mix lies in the goals of a region's economic development strategy. When unemployment is high, the goal of economic development has traditionally been to create jobs, thereby lowering unemployment. Today, the San Diego region's unemployment rate is at historical lows, and is projected to remain low over the next 20

years.⁴³ During times of low unemployment, aggregate job growth is no longer the primary goal of economic development. In the context of this study, we simulate a policy designed to improve the region's standard of living while minimizing population growth.

A strategy designed to increase high value added employment growth has the potential to reduce overall population growth. Why would increasing the number of high paying jobs relative to low paying jobs reduce population growth? Higher incomes would allow people to buy more goods and services. For example, if someone makes more money they might want to hire a gardener, or buy another car. While this may be true, the confusion over how employment in high value added industries can require less population than employment in lower value added industries stems from how employment multipliers are used.

Employment multipliers represent the ripple effect that occurs when money or jobs are added to the regional economy. Traditionally, multipliers have been used to measure the impact of new jobs. For example, a manufacturing plant adds 100 new jobs, selling products and bringing money into the region. The plant purchases supplies from local firms and employees spend some of their salary locally. Each transaction generates additional rounds of spending in the local economy. Eventually, the region may even need to add other jobs, especially in population serving industries like retail and government, to serve the new manufacturing jobs. This is one way to view the multiplier effect.

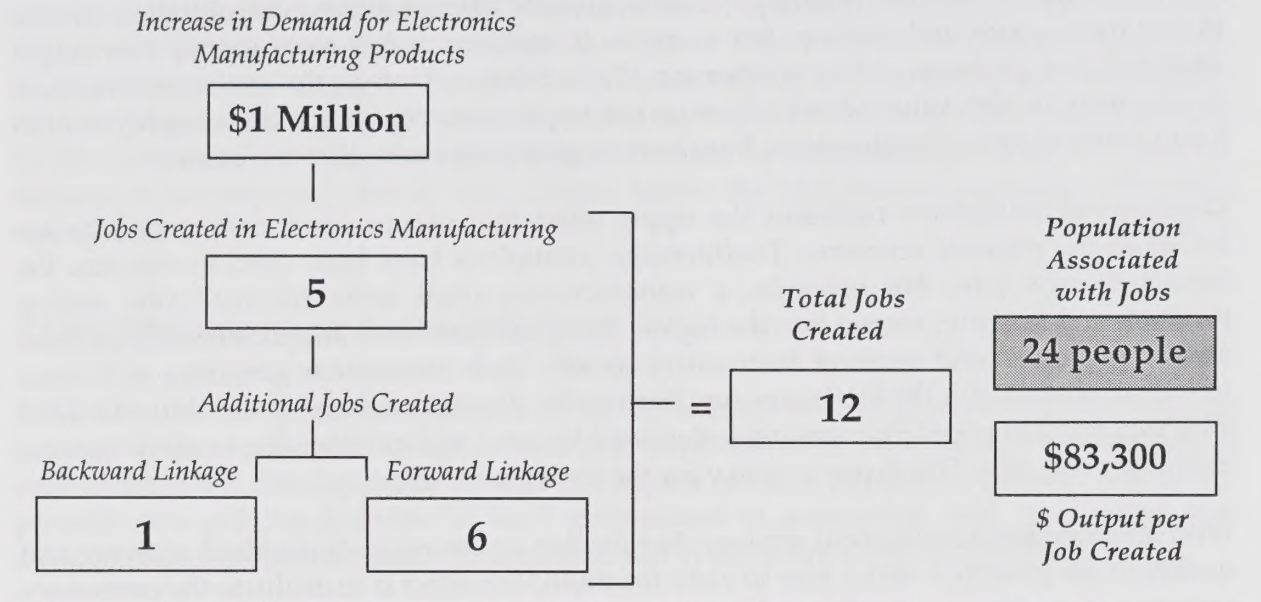
With an economic development strategy that focuses on the region's standard of living and quality of job growth, a better way to view the multiplier effect is to evaluate the economy's response to an increase in demand for its goods and services, as shown in Figure 2. An increase in demand represents increasing economic activity, which can occur regardless of whether a firm adds employment or not.

⁴³According to the California Employment Development Department, Labor Market Information Division, the average annual unemployment rate for the San Diego region in 2000 was 3.0 percent. The national unemployment rate is expected to average 4.1 percent between 2000 and 2025, according to DRI Economic Research. "DRI's The U.S. Outlook: The U.S. Economy." Standard & Poor's DRI Economic Research. McGraw Hill Publishing, Lexington MA. Summer 2000. During the past 30 years, the San Diego region's unemployment rate has fluctuated with the national rate, remaining within one percentage point of the U.S. rate in most years. The difference between U.S. and regional unemployment rates has not exceeded two percentage points since 1976.

Figure 3
Economic Strategy Designed to Slow Population Growth
Increase Standard of Living/Minimize Population Growth

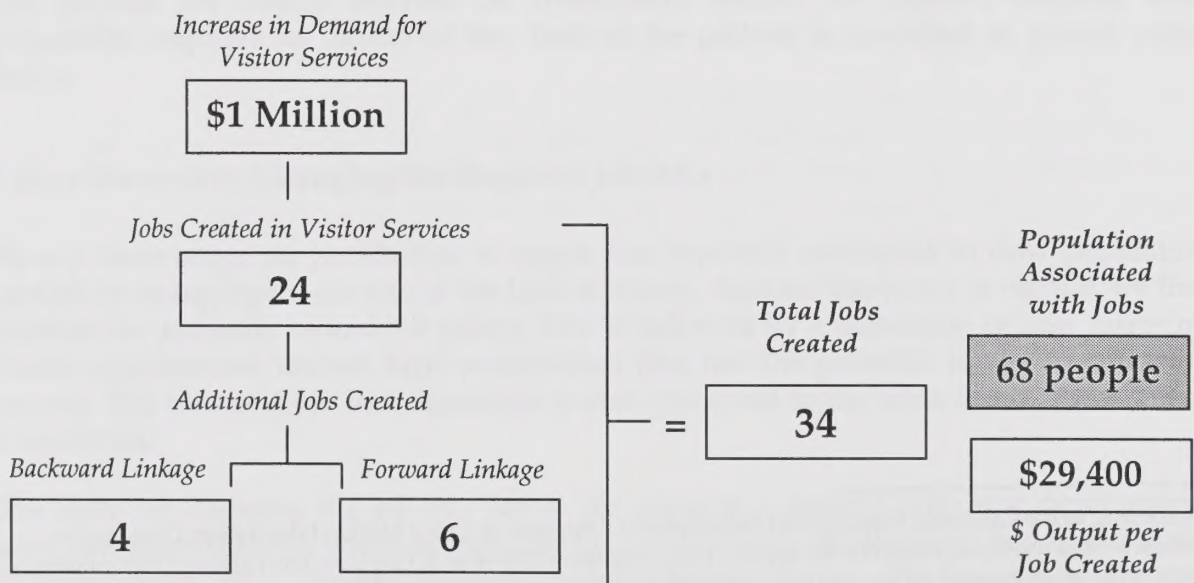
HIGH VALUE ADDED INDUSTRIES

(e.g., Electronics Manufacturing)



LOW VALUE ADDED INDUSTRIES

(e.g., Visitor Services)



When viewed in terms of an increase in demand, high value added industries contribute less to population growth than low value added industries. High value added industries, because they are more productive, require fewer workers to produce a product or provide a service than low value added industries. This difference is measured by economic output per employee in an industry over a given time period.

The electronics manufacturing industry and visitor services industry were chosen to illustrate the net result of the local economy's response to a \$1 million increase in demand for visitor services or electronic goods. The electronics manufacturing industry requires five employees to respond to a \$1 million increase in demand for its output, whereas the visitor services industry requires 24 employees to respond to the same increase in demand for its output.

Both of these industries generate additional effects on the local economy, which are captured in the employment multiplier. After all of the regional impacts are accounted for, the increase in demand for electronic goods has created 12 jobs, while the increase in demand for visitor services has created 34 jobs. The total population associated with the high value added employment is also smaller, 24 people for electronics manufacturing compared to 68 people for visitor services.⁴⁴

One reason for the difference in jobs and population is that employees in high value added industries have higher levels of skills and education on average, and greater levels of productivity. The ratio comparing dollars of output to jobs created is much greater for high value added industries. In addition, high value added industries require relatively more capital (machines) to produce their product, whereas the product of the visitor services industry primarily requires relatively lower skilled labor. Thus, for every \$1 million increase in demand for "visitor services," the region requires almost three times the number of employees to respond than it does for producing "electronic goods."

Most important for the impact simulation is that the total employment figures include all of the economic linkages related to an increase in output, both forward and backward.⁴⁵ The additional gardeners and new car purchases are included in the calculation of the impacts, and represent a forward linkage. Industries that support electronics manufacturing or visitor services also benefit from the increased economic activity, and represent backward linkages. However, a greater percentage of the total job increase is directly related to visitor industry employment, because low value added industries require more labor to produce their output, and create relatively less income for employees to spend in other sectors of the local economy.⁴⁶

⁴⁴ Applying the baseline population to labor force ratio of 1.99 persons per job.

⁴⁵ A forward linkage is between an industry producing a good or service and the consumers of that good or service. A backward linkage is between its industry and its suppliers.

⁴⁶ For additional discussion of the changing job mix policy, please refer to Section III.

The Simulation

Investment and Productivity

The policy simulation shifts growth in economic output from low to high value added industries as a result of public policies and investments. However, public sector investment alone is not enough to generate a shift in output. Government investment in infrastructure and public policies that encourage growth in high value added sectors of the local economy will also spur private sector investment.⁴⁷ Private sector investment will react to both the increases in economic activity and the additional regional capacity to accommodate business expansion. For example, if a new airport were built in the region, local firms would likely make additional investments that better enable them to take advantage of the new infrastructure. In addition, policies that provide local workers with new computer skills might encourage local employers to purchase additional computers for newly trained employees. Because investment is projected to increase over time, productivity should also increase, as the national economy continues to incorporate technological advances into everyday operations.

Many economists believe that high levels of investment in capital stock (such as investment in construction or in computers and software) are the key factor behind the recent trend in the national economy of high levels of productivity.⁴⁸ Investment's share of Gross Domestic Product (GDP) has risen from nine percent in the early 1960s to a level of 14 percent in 2000. According to DRI, "good profitability and solid demand growth should keep investment strong over the next 25 years."⁴⁹ Because no regional data is available, we assume that local investment's share of Gross Regional Product (GRP) is the same as the nation in 2000.

The parameter for this simulation is the increase in productivity that would occur from an increase in investment's share of gross regional product (GRP). Investment is projected to be 15.2 percent of GDP in 2020 in the U.S. and, by assumption, in the region as well. If the San Diego region were to increase investment's share of GRP over this time frame at a rate double that of the nation, investment would be 16.4 percent of GRP in 2020. This represents an increase of 2.4 percentage points from the 2000 investment share of GRP (14%). Our assumption about the growth in investments may be conservative since the investment share of GDP increased 4.3 percentage points in the U.S. between 1992 and 2000 (from 9.7% to 14%).⁵⁰ However, our assumption places investment's share of GDP at its highest level in recent history.

⁴⁷ Additional information regarding strategies designed to change the region's job mix is provided in Section III of this study and SANDAG, "San Diego Regional Economic Prosperity Strategy: Creating Prosperity for the San Diego Region." July 1998.

⁴⁸ DRI Economic Research. "DRI's The U.S. Outlook: The U.S. Economy." Standard & Poor's DRI Economic Research. McGraw Hill Publishing, Lexington MA. November 2000.

⁴⁹ DRI Economic Research. "DRI's The U.S. Outlook: The U.S. Economy." Standard & Poor's DRI Economic Research. McGraw Hill Publishing, Lexington MA. Summer 2000.

⁵⁰ DRI Economic Research. "DRI's The U.S. Outlook: The U.S. Economy." Standard & Poor's DRI Economic Research. McGraw Hill Publishing, Lexington MA. Summer 2000.

The faster rate of investment growth would increase total regional investment in 2020 to almost eight percent above the baseline. For every one-percent increase in the growth in investment (capital stock), there will be a 0.3 percent increase in labor productivity.⁵¹ Thus, labor productivity is allowed to increase a maximum of 2.3 percent (7.75 multiplied by 0.3) in this simulation.

The Shift in Output

The simulation begins by classifying the region's industries into high and low value added categories, according to their labor productivity (output per employee).⁵² An industry with a higher than average output per employee is considered high value added. The higher the output per employee, the fewer workers required to reach any amount of output. In 2000, high value added industries make up 33 percent of total employment. In the baseline forecast, this share declines by seven percent, as high value added employment decreases to 26 percent of total employment in 2020.

For the simulation, only the increase in annual output between 2000 and 2020 is subject to the policy. The policy as simulated does not force output from existing businesses to shrink in order to facilitate a shift to high value added employment. As shown in Table 5, the increase in the region's economic output between 2000 and 2020 is projected to be 62.6 billion dollars in the baseline. The simulation shifts output from low to high value added industries, it does not change the productivity (output per employee) of any industries.⁵³ Furthermore, total output does not change from its baseline level.⁵⁴

⁵¹ Slifer, Stephen D. and Harris, Ethan S. *Economics Newsletter*, Lehman Brothers: New York. October 30, 2000. Page 2.

⁵² In order to separate the region's industries into high and low value added, we used output per employee as a proxy for value added per employee. Historical data for output and value added confirms that the trend in value added per job is similar to the trend in output per job, and the industry groupings that result from either measure are essentially the same. We use output as a proxy for value added in this simulation because output is the measurement used in the baseline forecast.

⁵³ It is assumed that public policies and investments directed at high value added industries would benefit them more than low value added industries. However, it is not possible to exclude all low value added industries from taking advantage of the public policies and investments associated with this policy. There is a risk that low value added industries will benefit to a greater extent than high value added industries, and weaken the ability of the policy to slow population growth.

⁵⁴ Output and GRP remain constant in the simulation so that the impacts can be directly attributed to the shift in output from low value added industries to high value added industries. It is possible that GRP would increase under if this policy were implemented in the region, which would also weaken ability to slow population growth.

Table 5
Output (in Billions of 2000 dollars) in 2000 and 2020

	Low Value Added Industries	High Value Added Industries	All Industries
Baseline 2000	\$37.9	\$44.7	\$82.6
Baseline 2020	\$69.7	\$75.5	\$145.2
<i>Baseline Change</i>	\$31.8	\$30.8	\$62.6
Policy 2020	\$66.6	\$78.6	\$145.2
<i>Change under Policy</i>	\$28.7	\$33.9	\$62.6

Sources: SANDAG 2020 Regionwide Forecast, July, 1998. SANDAG Policy Simulations, 2001.

The greater proportion of the growth in output in high value added industries implies an increase in the region's overall level of output per employee. This occurs because the same level of output is produced using fewer workers. The shift in output in the simulation is consistent with the 2.3 percent increase in labor productivity assumed above. To increase regional productivity, an additional five percent of the growth in output from 2000 to 2020 (\$3.1 billion of the \$62.6 billion) must occur in high value added industries, as shown in Table 5. Output per employee for each industry in the simulation is unchanged from the baseline forecast. However, because a greater proportion of the region's output is in high value added industries, total regional output per employee increases. This effect is shown in Table 6.

Table 6
Average Output per Employee in 2000 Dollars

	Low Value Added Industries	High Value Added Industries	Weighted Average of All Industries ²
Baseline 2000	\$48,200	\$116,600	\$70,600
Baseline 2020	\$63,700	\$193,300	\$97,700
Simulation 2020 ¹	\$63,700	\$193,300	\$100,000
<i>Difference from Baseline</i>	0.0%	0.0%	2.3%

¹ Total regional output and average output per employee for all industries remain constant in the simulation.

² Regional output per employee in 2020 is higher in the simulation than in the baseline because a greater proportion of the region's output is in high value added industries.

Sources: SANDAG 2020 Regionwide Forecast, July, 1998. SANDAG Policy Simulations, 2001.

Employment

The increase in output in the baseline forecast is evenly divided between low and high value added industries. However, because of productivity increases in the baseline forecast between 2000 and 2020, employment growth in high value added industries is only two percent, or about 7,000 jobs over the 20-year period. Low value added industries grow by about 307,000 jobs over the same time period, a 27 percent increase. Because job growth in high value added industries is extremely low in the baseline, there is great opportunity to change the way the region will grow over time.

Employment under the policy simulation in 2020 is calculated by dividing total output by output per employee. Overall output in the simulation is the same as in the baseline forecast (\$145.2 billion). However, under the policy simulation, high value added industries have a total output of \$78.6 billion (compared with \$75.5 billion in the baseline) and low value added industries have a total output of \$66.6 billion (compared with \$69.7 billion in the baseline). Because of the shift in output to high value added industries, there will be 1,452,400 wage and salary jobs in 2020, about 33,000 fewer than in the baseline forecast (1,485,400). The employment for high value, low value, and all industries is shown in Table 7.

Table 7
Wage & Salary Employment in 2000 and 2020

	Low Value Added Industries	High Value Added Industries	All Industries
Baseline 2000	787,300	383,700	1,171,000
Baseline 2020	1,094,800	390,600	1,485,400
<i>Baseline Change</i>	<i>307,500</i>	<i>6,900</i>	<i>314,400</i>
<i>Baseline Percent Change</i>	<i>39%</i>	<i>2%</i>	<i>27%</i>
Policy 2020	1,045,700	406,700	1,452,400
<i>Change under Policy</i>	<i>258,400</i>	<i>23,000</i>	<i>281,400</i>
<i>Percent Change under Policy</i>	<i>33%</i>	<i>6%</i>	<i>24%</i>

Sources: SANDAG 2020 Regionwide Forecast, July, 1998. SANDAG Policy Simulations, 2001.

Population

To determine how much population growth would result in 2020, the simulation applies the baseline ratio of labor force to population (1.99) and unemployment rate (5.8%) to employment. Under the policy, there will be 33,000 fewer jobs in 2020 than in the baseline forecast, as shown in Table 8. The simulation results in a regional population of 3,784,000 in 2020, almost 70,000 people lower than the baseline forecast.

Table 8
2020 Summary Information for Changing Job Mix Policy

	Baseline	Policy	Difference
Population	3,853,300	3,783,600	-69,700
Housing Stock	1,404,200	1,378,000	-26,200
Household Size	2.81	2.81	0
Residential Vacancy Rates ¹	5.6%	5.6%	5.6%
Civilian Jobs	1,627,800	1,594,800	-33,000
Commuters into Region	143,300	143,300	0
Per Capita Income ²	\$34,100	\$34,700	\$600
Average Home Price ²	\$371,100	\$352,600	-\$18,500
Ratio of Home Price to Income ³	3.87	3.61	-0.26

¹ Comparable to the census vacancy rate, not a market vacancy rate. For more discussion of residential vacancy rates, see Appendix A.

² Inflation-adjusted 2000 dollars.

³ Ratio of average home price to average income per household. Historical peak in 1990 at 4.06.

Sources: SANDAG 2020 Regionwide Forecast, July 1998; Policy simulations, SANDAG, 2001

Impacts

Because the policy to change the region's job mix does not restrict the supply of housing or employment space, many of the outcomes are the same as in the baseline scenario. For example, unemployment, household size, residential and non-residential vacancy rates, and employment densities are all the same as the baseline.

Per Capita Income

Real per capita income increases an additional two-percent (\$600) compared with the baseline forecast under the policy, as shown in Table 8. This occurs because a greater proportion of residents will be working in high value added industries compared to the baseline in 2020, and there are fewer people in the region.

Labor Skills and the Job Market

In addition to the overall number of new jobs, the mix of businesses and the distribution of jobs by skill level will change. While investment in education and training is a major component of the policy, some residents may be forced to upgrade their skills to find work or have to leave the region in search of other employment opportunities. However, the extent to which this will occur is unclear, and over the long run the relationship between the local labor supply and labor demand will stabilize. Moreover, the region continues to create job opportunities in low value added industries, and positions requiring diverse skill levels are abundant in both types of industries. Compared to the baseline forecast, the policy slows

the demand for employment in lower value added industries by six percent and raises the demand for employment in the high value added industries four percent between 2000 and 2020.

Housing Prices and Units

Under the changing job mix policy, labor force and population growth are slower than in the baseline. Fewer households are formed and the demand for housing is reduced. As a result, housing prices will be lower than in the baseline. With demand for housing units in the simulation two percent lower than in the baseline forecast, the average price of a single family detached home in 2020 would be \$352,600, five percent less than the baseline price of \$371,100 (in 2000 dollars). The ratio of home price to income also decreases under the policy. Housing is more affordable, because incomes have risen while the price of housing has declined. A smaller population also generates less demand for new housing units. Under the changing job mix policy, the region requires 26,200 fewer units than under the baseline scenario.

Limitations to Implementation

The changing job mix policy requires regional collaboration and agreement on large projects and calls for a reallocation of scarce public resources from their current target on low value added industries to high value added industries. Educating and improving the skills of the local labor force will require significant investment and support from the public and private sectors.

The public policies and infrastructure investments included in a policy to change the region's job mix would be designed to encourage the expansion and retention of high value added industries. However, it will be difficult to exclude low value added industries from also benefiting from these actions. For example, improving the quality of the local labor force by investing in public schools will benefit all types of employers. If low value added industry benefits as much as high value added industry, the policy may not slow population growth.

The key factor in this simulation is the ability of the local labor force, and the institutions they depend on, to meet the challenges presented. Shifting more of the job growth from industries with a low output per employee to those with a higher output per employee implies an increase in average output per employee, referred to as labor productivity, within the region's economy. This can be accomplished by improving employee skills or by shifting from labor to capital (machinery). History has shown that changing the capital to labor ratio can be a slow process, and can often require many years to adjust. Also, the time required to improve the skills of the local labor force is uncertain. The local education system, work force development programs, and other agencies involved in training the labor force may not have adequate funding or time to meet the challenges this strategy presents.

Policy Overview: Payroll Tax

A regional payroll tax requires local businesses to pay a percentage of their payroll to local government. A payroll tax has the potential to slow growth because it increases the cost of doing business, thereby increasing the probability that the region will be less competitive. This policy may reduce some amount of employment and population growth in the region because it discourages local business from hiring additional employees and discourages employment-related migration. However, the ability to slow population growth depends largely on how the tax revenue is used. If the tax benefits the region, the growth-slowing ability of the tax is offset and growth will continue unaffected.

Because the regional payroll tax generates additional public revenues to be invested locally, it is similar to the changing job mix policy. The primary difference between the two policies is that the job mix policy redirects current sources of funding while the payroll tax collects additional revenue from the public. Under the payroll tax, current public investments would likely remain in place. Therefore, the region could continue to invest in low value added industry while simultaneously investing the additional tax revenue in large infrastructure investments that benefit high value added industry (the same investments called for under the job mix approach). Under this scenario, not only would the benefits of the additional public investments offset the growth slowing potential of the tax, they may also increase the region's rate of population and employment growth compared to the baseline scenario. Because it is unclear how the tax revenue will be used in the region, or who will benefit, we have not simulated this policy. Instead, we provide a discussion of how a regional payroll tax might affect the San Diego region.

Whether or not the regional payroll tax benefits the region depends on the public sector's ability to convert the tax revenue into something that improves quality of life or economic competitiveness. Such a tax would provide additional public services that may generate positive effects and make the region more attractive to businesses wanting to expand or locate here. In fact, if the extra public services are of direct benefit to business, such as improved transportation infrastructure, they may fully offset the burdens of the additional taxes, especially in the long term. Even if the additional public services are mostly directed at improving the quality of life for residents, this may indirectly benefit businesses by the ability to attract and retain workers at lower wages. A high quality of life acts like a second paycheck to many people. Some people accept a lower wage for the privilege of living in a nice place.

If the region were to impose a payroll tax, local business would be forced to adjust to an increase in the cost of doing business, or they would have to leave the area. In order to remain in the area and stay competitive, local firms could respond in three ways: lower wages, move away from a labor-intensive production process towards a more capital-intensive approach (i.e., more machines and fewer workers), or increase prices. It is difficult to reduce wages, especially in the short term, and workers would likely resist a tax increase if they perceive that they would absorb the majority of the impact. In addition, labor mobility into and out of the region would make it difficult for employers to shift the burden of a

regional payroll tax onto workers by decreasing their wages.⁵⁵ Shifting from labor to capital is only an option for certain types of businesses and industries (like manufacturing), and is a process that can take years to complete. Thus, increasing prices to cover the additional costs of production would be the most likely reaction to a payroll tax, especially during the first years of implementation. Increasing prices may reduce demand and hurt sales and profits for local businesses.

Impacts

A payroll tax is a general tax on all types of employment, although it tends to affect certain types of businesses the most. Because the tax focuses on wages, it is likely to have a greater regional impact on labor-intensive small businesses, service suppliers, and other low value added industries.⁵⁶ Small businesses may be the most directly affected because payroll is a larger part of their overall costs and the tax makes labor more expensive. Small businesses are an important part of the economy in the San Diego region. For example, 85 percent of firms in the region employ ten people or fewer and nearly 40 percent of total civilian employment is in firms employing 25 people or less.⁵⁷

The effect on the regional economy of increasing prices for a new tax will be different for each industry, and there is a ceiling on each industry's ability to raise prices. Some industries face competition in the global marketplace, and are unable to raise prices without losing customers or clients. These industries will feel the negative effects of a payroll tax more than industries facing less competition, and may be forced to leave the region or lay off some employees. Industries that have the ability to raise prices, or that rely less on labor, are also affected by the tax because demand for their product will likely decline as it becomes more expensive. This may cause inventory to accumulate in warehouses, service staff to be idle, or force companies to leave the region. Others may choose not to expand or locate here. Under any scenario where prices increase, there is likely to be a loss of profits for firms in the local economy due to decreasing demand for their product, especially in the short term.

The regional unemployment rate would likely increase under a regional payroll tax, especially in the first few years of the policy. In the short term, unemployment will be volatile, as local firms react to the new tax. Over a longer time frame, unemployment will become more stable as the region has time to restructure and adjust. However, firm layoffs are not generally equally distributed, and low wage, less skilled jobs are often the first jobs to be removed from the payroll.

⁵⁵ Kesselman, Jonathan R. "Economic Issues of General Payroll Taxes" Center for Research on Economic and Social Policy. Discussion Paper: DP 41. University of British Columbia, Vancouver, Canada. 1996. P.38

⁵⁶ Kesselman, Jonathan R. "Economic Issues of General Payroll Taxes" Center for Research on Economic and Social Policy. Discussion Paper: DP 41. University of British Columbia, Vancouver, Canada. 1996. P.43

⁵⁷ Source: 1995 Employment Inventory (SANDAG).

Also, low skilled residents are often the first to be laid off during difficult economic periods. Some firms have the ability to substitute machines for people, and will respond to the tax by becoming more capital intensive. Other firms will lay off workers in an attempt to reduce costs. Low skilled workers are the most substitutable type of employee, because they normally have fewer essential job skills.

A payroll tax is regressive because it places a greater burden on lower income workers, who pay a greater proportion of their total income to the tax.⁵⁸ Earnings from employment are the largest source of money for low-income residents. If a payroll tax is not designed to account for this fact, low income residents end up relatively worse off than other residents with higher incomes who earn income from a variety of sources.

Limitations to Implementation

Implementing a regional payroll tax would be problematic, and its effectiveness for slowing growth is unclear. Among the most important limitations to implementing a payroll tax is that it would require a two-thirds majority popular vote and would place a relatively greater burden on low-income workers. The tax's ability to slow growth is also questionable. In order to have a negative effect on employment and population growth the tax must be large enough to hinder the success of the local economy. However, because the tax revenue will be invested locally, it most likely will improve the region's quality of life or competitiveness in some way, offsetting the growth slowing ability of the tax.

Even though the tax has the potential to assist the region, the tax would likely meet resistance on the grounds of reduced regional competitiveness because it increases the cost of doing business. Furthermore, the risk that the tax will increase unemployment in the short run goes against current economic development efforts in the region designed to keep unemployment low and retain and expand local industry.

FAMILY PLANNING AS A GROWTH SLOWING POLICY

Between 2000 and 2020, the baseline forecast shows that births contribute significantly to population growth in the San Diego region. Reducing the number of future births by lowering fertility rates through expanded family planning programs has been suggested as a policy for slowing population growth.

While government has no direct control over family size, it could target more resources toward family planning and public health education and lend a strong voice toward advocating for national family planning programs.⁵⁹

⁵⁸ A regressive tax is a tax where the ratio of tax paid to income falls as income rises.

⁵⁹ The term "family planning" can refer to a variety of programs and policies. In general, family planning programs offer people educational and clinical services related to the number and spacing of births and other reproductive health issues.

National Policy and Family Size

Regulating family size is not a policy goal at any level of government in the U.S. In fact, the only official U.S. policy on fertility is to support the World Population Plan of Action prepared by the United Nations in Bucharest in 1974. The Plan of Action recommends that all countries “respect and ensure, regardless of their overall demographic goals, the right of persons to determine, in a free, informed and responsible manner, the number and spacing of their children.”⁶⁰ Policies that would attempt to place explicit controls on the number of children a family may have would be almost universally rejected in the U.S., and policy makers do not want to regulate or legislate fertility behavior. Further, incentives designed by governments in industrialized nations to encourage families to have more children have also not succeeded. “Experience in Europe, Japan, and other countries suggest that governments can encourage people to have more children, but at a high price and not enough to affect long-term trends.”⁶¹

Fertility Trends

By historical standards, current fertility rates in the U.S. are relatively low. The total fertility rate (TFR), the average number children that women would have in their lifetime based on current births and population levels, peaked in 1957 in the United States at 3.7 children per family, and declined to 1.7 in 1976.⁶² It rose to 2.1 in 1990 and, according to estimates, has remained near two children per family, very close to “replacement rate.” If fertility was to remain at replacement rate and there was no future immigration, the nation’s population would eventually stabilize.

Fertility rates in the region are slightly higher than the U.S. rates, due to the region’s higher share of foreign migrants and military personnel. On average, foreign-born women in California have more children than U.S. born women in California.⁶³ Military personnel also have higher rates of fertility than civilians do. In the 1990s, 15 percent of the region’s births were children of military personnel.⁶⁴ Despite these differences, the region’s TFR has fallen from 2.34 in 1990 to 2.16 in 2000.

⁶⁰ World Population Plan Of Action, Adopted by the World Population Conference Bucharest, 1974. Reprinted in *Population and Development Review*, September 1975.

⁶¹ Kent, Mary. “Shrinking Societies Favor Procreation.” *Population Today*, December 1999.

⁶² U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, “Ten Great Public Health Achievements: Family Planning.” Available at <http://www.cdc.gov/phtn/tenachievements/family1/fp1.htm>.

⁶³ Heim, Mary and Austin, Nancy, “Fertility of Immigrant Women in California.” *Population and Environment*, May 1996.

⁶⁴ SANDAG’s 2020 Regionwide Forecast. The forecast uses different fertility rates for military and civilian population based on historical census data and county birth records.

Most forecasts of fertility rates in the U.S. and the region are suggesting stable or declining rates for all ethnic groups. Hispanics experienced the region's largest decrease in TFR of any ethnic group, from 3.61 in 1990 to 2.97 in 2000 and are forecast to reach 2.45 in 2020. These forecasts are predicated on several factors including the trends toward improvements in educational attainment and the decreasing share that immigrants will be in our population of childbearing age. According to the National Center for Health Statistics, the TFR in 1994 in the U.S. was 1.7 for women with 16 years of education or more (college graduates). This compares with TFRs of 2.7 for women with 12 years of education (high school graduates with no college) and 3.2 for women with eight years of education or less.⁶⁵ As for immigration, even if current levels of foreign migration continue, the immigrant share plateaus between 24 and 27 percent of the total state population beyond the year 2000.⁶⁶

Unwanted Births

The primary mechanism that family planning programs have available to influence fertility rates is to reduce the number of unwanted births. Ten percent of births between 1990 and 1995 were unwanted by the mother at the time of conception, compared with 12 percent between 1984 and 1988.⁶⁷

Because unwanted births have fallen to a small percentage of total births, additional reductions in unwanted births will be increasingly difficult to achieve. Unwanted births are defined as those that were not "wanted" at the time that the child was conceived. Even if all of these births could have been prevented, total fertility rates would not be reduced by ten percent, because wanting to have a child is a function of both timing and number. Some of the unwanted births do not affect the total number of children that a woman will have; they simply reflect childbearing that occurs sooner than planned.

Effectiveness of a Family Planning Policy

We conclude that a policy directed at family planning programs with the intent of slowing future population growth in the region raises a number of issues. First, no public policies exist at any level of government in the U.S. to control the number of children that a family wants to have, and none are ever likely to be enacted. Current fertility rates are already very low in the U.S. and in the San Diego region, corresponding to a family size of about two children per couple. This family size is close to "replacement rate," and close to the average number of children that people say that they want, and our forecasts of these rates are stable

⁶⁵ Matthews, T.J. and Ventura, Stephanie, "Birth and Fertility Rates by Educational Attainment: United States, 1994." U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, *Monthly Vital Statistics Report*, April, 1997.

⁶⁶ Myers, Dowell and Pitkin, John, *Demographic Futures for California*. Population Dynamics Group, School of Policy, Planning, and Development. University of Southern California. Los Angeles, California. 2001.

⁶⁷ Abma J, Chandra A, Mosher W, Peterson L, Piccinino L. *Fertility, family planning, and women's health: New data from the 1995 National Survey of Family Growth*. National Center for Health Statistics. Vital Health Statistics Series 23, Number 19. May 1997.

or declining for every ethnic group. Finally, the ability to reduce births through family planning programs is limited to reducing unwanted births. Unwanted births have fallen to only ten percent of total births, including births that occur sooner than planned.

We are not suggesting that family planning programs are not important. These programs result in a number of health benefits including helping people have the number of children they want when they want them. However, family planning programs or governmental policy do not control or determine family size goals and desires.

NATIONAL POLICY TO REDUCE FOREIGN MIGRATION

A significant portion of the San Diego region's population growth between 2000 and 2020 will be attributable to international migration. Furthermore, the projected demographic composition of the region's international migrants is one that carries higher than average fertility rates, which will contribute to greater levels of natural increase. Some feel that reducing the amount of immigrants allowed into the country would be an effective policy towards slowing population growth in the region.

Unlike fertility rates, there are national policies in place that have direct control over the amount of international migration that occurs each year. However, at the regional level, local public policy has no control over international migration. It may be interesting to speculate what the regional impacts might be if the federal government decided to reduce international migration below its current level. However, this policy is not simulated because it is unavailable to local jurisdictions and does not help answer the question "can local public policies slow population growth?" Also, our research found no case studies or empirical evidence available that describes the regional impacts of national policies that reduce international migration.

International Migration to the San Diego Region

The impact in the San Diego region of a national policy that reduces international migration is unclear for two reasons. First, domestic in-migration may increase to meet the local demand for labor no longer filled by international migration. The impacts will depend heavily on the performance of the local economy and the ability of the region to supply enough labor to meet demand. If the local economy continues to grow at a rapid pace, it is likely that the region will need to import workers to meet the demands for labor. Nationally, labor force needs will likely be met with increasing levels of immigration. As the baby boom demographic cohort moves into retirement ages, an increasing amount of the nation's labor force will be foreign born. Projections from the U.S. Census Bureau "anticipate an increase in the influx of migrants to the U.S. as a response to this dramatic downward shift in the availability of potential workers relative to people outside the normal working ages."⁶⁸ If demand for workers outpaces growth in the region's labor force, the region will import

⁶⁸ U.S. Census Bureau. "Methodology and Assumptions for the Population Projections of the United States: 1999 to 2100." Population Division Working Paper No. 38. January, 2000.

employees regardless of whether the workers are U.S. citizens, undocumented workers, or legal international migrants.

Second, the region's share of the nation's international migration might change. A reduction at the national level does not guarantee a reduction at the regional level. Many immigrants locate where they have family or other personal contacts. Because the region already has a significant number of foreign migrants residing here, it will continue to attract additional immigrants each year. The regional reduction given a national policy that decreases total immigration is unclear. Moreover, the percentage reduction in the region's immigrant population is likely to be significantly less than the reduction nationally.

National Immigration Policies

Perhaps most importantly, it is unclear what the federal government policy on international migration will be in the near future, and very unlikely that immigration will be stopped altogether. In fact, recent U.S. policy has been to increase the amount of people from abroad allowed to work here. Even if these "guest workers" are not included among the 800,000 immigrants admitted annually for legal permanent residence, they will still contribute to the overall size of the region's population. Up to 195,000 H1-B visas are issued annually to admit skilled workers into the U.S. for a six-year period.

Section III

PUBLIC POLICIES FOR SLOWING GROWTH

HOW THIS SECTION IS ORGANIZED

The purpose of Section III is to provide background information on growth slowing policies. The section begins with a statement of the difference between growth management and growth slowing policies, followed by an overview of policies available in local jurisdictions. The section concludes with a discussion of various regional factors that attract or provide growth.

GROWTH SLOWING VERSUS GROWTH MANAGEMENT

Unfortunately, there are no universally accepted definitions that differentiate growth management from growth slowing policies, and many people use them interchangeably. There is, however, a difference.

Growth slowing policies are designed to significantly slow the rate of growth in population, housing construction, and possibly the economy from levels that would occur in an unregulated market.¹⁰ Essentially, these policies intend to slow and "control" growth. Growth slowing policies are sometimes referred to as growth limits. However, the term "limit" implies a capacity or some finite amount of growth or the ability to stop growth. We have opted to use the term growth slowing policies for this study.

Growth management programs, on the other hand, focus on directing, channeling, or slowing growth such that it is limited with fewer costs and without negative impacts on the region's quality of life. Growth management policies are designed to manage growth while growth continues. Although individual jurisdictions may have different interpretations of these boundaries, we were unable to find any examples of growth management strategies for large metropolitan regions like the Triplex.

SECTION III: PUBLIC POLICIES FOR SLOWING GROWTH

¹⁰ Lucio, John. 2012. "Do Growth Control Policies in any Way Reduce the Demand for Housing, Jobs, and Services? The Growth Management Foundation." *California*.

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Growth management programs, on the other hand, focus on allocating, channeling, or shaping growth such that it is handled with fewer costs and reduced negative impacts on the region’s quality of life. In our usage, growth slowing policies influence the rate of growth while growth management tries to influence the quality and location of growth. Although individual jurisdictions have enacted policies that have slowed growth within their boundaries, we were unable to find examples of successful growth slowing strategies for large metropolitan regions like San Diego.

⁶⁹ Landis, John D. “Do Growth Controls Work? A new assessment.” *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL.

DESCRIPTION OF GROWTH SLOWING POLICIES

Local jurisdictions in California already have a number of potential growth slowing tools at their disposal. Existing forms of land use control available to communities for slowing or managing growth include general plan amendments, zoning, building and safety codes, parking requirements, development impact fees, and more. As William Fulton notes:

“Cities and counties can refuse requests to rezone developable land from one use to another, thereby limiting the intensity and supply of new development. Cities can refuse to annex vacant land supplies needed to accommodate growth. Cities and community groups can pressure developers or permit authorities to reduce project densities or to deny projects altogether (referred to as ‘Not in my backyard,’ or NIMBYism). Cities and utility districts can refuse to extend utility services to developing areas, thereby limiting their development potential. Cumulatively, these individual acts can have a regionwide effect on the supply of housing.”⁷⁰

As illustrated in Section II of this study, although local governments can affect the supply of housing or employment space, their ability to affect population growth is limited.

Growth slowing policies have evolved over time, and will continue to evolve as the State of California increasingly feels the pressure of a greater population. In the 1970s, growth policies that restricted the amount of construction allowed were popular, along with prohibitions related to the California Environmental Quality Act (CEQA). During the 1980s, infrastructure requirements, such as development impact fees, gained popularity. The 1990s witnessed the more prevalent use of urban limit lines and growth boundaries. Each decade, voters welcomed new attempts at slowing growth or managing its impacts.⁷¹ Despite these attempts, population growth continues throughout the State of California.

Not all growth-related policies are developed specifically to slow growth, but many can be adjusted such that they are designed to do so. Although methods of implementation vary widely, local public policies designed to slow population can be classified into three main categories:

- Policies that limit the supply of housing.
- Policies that limit the capacity of the economy.
- Policies that target public expenditures.

⁷⁰ Landis, John. “Do Growth Controls Work? A New Assessment.” *Journal of the American Planning Association*, Vol. 58. No. 4. Autumn 1992. American Planning Association, Chicago, IL.

⁷¹ Fulton, William. “Insight: History Tells Us Voters Want to Slow Growth, Create Boundaries.” *California Planning and Development Report*. November 2000. Available on-line at www.cp-dr.com.

The following list summarizes the policies described in this section.⁷² Not all policies were simulated, as the impacts for one policy are often similar to another and do not need to be repeated.

Policies that Limit the Supply of Housing

Regulating Development

- Limits on residential development*
- Housing targets and moratoriums

Tying Growth to Infrastructure

- Residential development impact fees
- Residential adequate public facilities requirements

Policies that Limit the Capacity of the Economy

Regulating Development

- Limits on non-residential building permits*
- Employment space targets and building moratoriums

Tying Growth to Infrastructure

- Non-residential development impact fees
- Adequate public facilities requirements

Policies that Target Public Expenditures

- Changing the region's job mix*
- Annual payroll tax

* Policies with an asterisk are simulated in this study.

This classification system is only one way to represent the types of growth slowing policies available. Other studies present them according to their intention or purpose. For example, the policies could be grouped into strategies designed to preserve natural resources, to improve economic opportunity, to ensure adequate community infrastructure, or to maintain a community's quality of life. In addition, there are other growth management related techniques not addressed here, such as conservation planning, redevelopment, and performance zoning. These policies are important, but are not used to slow the rate of population growth. Also, this section includes a discussion of related growth management policies not specifically designed to slow growth, including urban growth boundaries and urban limit lines. These policies are often seen as growth slowing mechanisms, but actually focus on the allocation of development, and not the rate of population growth.

⁷² Family planning and reducing foreign immigration are also discussed as potential growth slowing policies in Section II.

POLICIES THAT LIMIT THE SUPPLY OF HOUSING

Regulating Residential Development

Limits on Residential Development

Restricting the amount of residential building permits would place an annual limit on the amount of new unit construction allowed each year. Typically, the limit is set to reflect the average amount of construction over some representative time period. For example, Boulder, Colorado limited growth to 450 units per year, an annual rate of 1.5 percent, after several years of rapid growth between five to ten percent.⁷³ The Cities of Camarillo and Thousand Oaks in California also enacted residential caps, limiting new housing to 450 and 500 units per year, respectively.⁷⁴

Housing Targets and Moratoriums

Development moratoriums are temporary or permanent housing limits that prohibit new development. The restriction can be placed on all new development, or on a particular type or location. Moratoriums are usually imposed if a community feels that it is overburdened by growth and unable to provide a safe and adequate level of service to all residents. In this respect, a moratorium seeks to protect a community from the negative effects of development. A housing target policy determines the ultimate number of units to be built in an area. Once the target is reached, a moratorium would be imposed.

Moratoriums on housing construction and targets that focus on an ultimate number of housing units are similar to limits on annual residential permits. Moratoriums, however, are stricter because they do not allow any new development once in effect. A target approach that focuses on housing allocates a certain amount of new units each year, until the maximum level is reached. After that point in time, if no new housing units are authorized it becomes a moratorium.

Typically, a moratorium is temporary, and is only imposed to allow a jurisdiction to recover from a period of rapid growth. In the short term, moratoriums do not have much of an impact because many developments are already in the pipeline or near completion. Also, builders obtain as many permits as possible while the restriction is awaiting approval. In the long run, the potential for a greater level of impact increases, as no new units are built. Longer-term moratoriums might also meet with a greater deal of resistance and could face legal challenges.

⁷³ Porter, Douglas R. *Managing Growth in America's Communities*. Island Press. Washington, D.C. 1997

⁷⁴ Landis, John D. "Do Growth Controls Work? A new assessment." *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL.

Tying Growth to Infrastructure

Residential Development Impact Fees (DIF)

Residential development impact fees and exactions are financial requirements imposed by local governments as a condition for issuing permits or granting development approval. The fees are assigned to pay for additional public facilities and services, such as roads and sewers, needed to serve new development. Many communities waive the fees if the developer builds the necessary infrastructure. If a fee levied on development is used simply to raise revenue and is not part of a growth management plan, it may be legally challenged in court.

Development impact fees can be used as part of a growth slowing strategy because they increase the cost of development, and therefore, the cost of housing. The state of the economy is a primary determinant of who ultimately pays the fee. If the economy is doing well, developers will be able to pass on a greater amount of the fee to the consumer than if the economy is doing poorly. Because the fees increase the average cost of producing housing, they hinder the production of affordable units.

Impact fees do have the potential to increase the speed of development because they reduce uncertainty. One study found that fees create a “contract” between developers and local governments that ensures certain facilities are provided. “Impact fees improve the certainty of land development proposals and generate revenue to extend facilities. This, in effect, benefits developers who pay the fees, eliminates much of the ad hoc process of exaction negotiation, and treats all development proposals similarly.”⁷⁵ Improving the speed of the development process would better enable a region’s development community to supply housing during a period of rapid growth.

Residential Adequate Public Facilities Requirements

Adequate Public Facilities Ordinances (APFO) and service requirements allow local governments to deny approval of any new developments unless the principal categories of infrastructure needed to service it (such as roads, sewers, water systems, and schools) have already been built or will be built in time to serve the development. Similar policies include subdivision requirements, utility requirements, and other restrictions that increase the cost of development by forcing developers to provide additional infrastructure or services. APFOs indirectly guide the location of growth by providing additional incentives to develop near existing facilities.

Walnut Creek, California pioneered the use of service standards to regulate commercial development. Under the terms of Measure H, new development projects are denied approval until the developer meets specific infrastructure and public service level-of-

⁷⁵ Nelson, Arthur. Frank, James. and Nicholas, James. “Positive Influence of Impact-Fees in Urban Planning and Development,” *Journal of Urban Planning and Development*, vol. 118 no. 2. June 1992.

service standards. In this sense, a stringently applied growth management tool functions as a growth slowing policy.⁷⁶ The City of Santa Barbara also restricts growth indirectly by declining to plan for and fund infrastructure extensions, such as additional water hook-ups.⁷⁷ Some argue that Santa Barbara has been successful at slowing growth. However, the City of Santa Barbara represents a unique situation, and is not comparable to the San Diego region. Santa Barbara does not have a large and diverse employment base capable of driving population growth. Also, because the region has a smaller population, there is less population momentum, in the form of natural increase. While population growth in the City of Santa Barbara may have slowed, there are several communities within commute distance able to house Santa Barbara's workforce.

POLICIES THAT LIMIT THE CAPACITY OF THE ECONOMY

Regulating Development

Limits on Non-Residential Building Permits

Limits on non-residential building permits place an annual limit on the amount of new construction allowed. The policy restricts the supply of employment space with the intention of reducing the region's ability to accommodate more jobs, and therefore, more people. Typically, the policy is based on the average square footage of construction over some representative time period. Highly desirable locations, such as the Sorrento Mesa area in the San Diego region, might experience the effects of restrictions much sooner and more severely. Desirable areas are often the first to be developed, and may experience overcrowding if demand for space is not met.

The City of San Francisco is one of the few jurisdictions to place annual limits on non-residential building permits. In 1986, San Francisco voters passed Proposition M, which limited the amount of new office construction at 950,000 square feet annually. This restriction differs from a more general restriction on the economy in that it targets a specific type of development. The intent of the proposition was not to limit overall economic development, but to prevent high-rise development from overwhelming the physical setting and neighborhood character of the city, and displacing small businesses.⁷⁸ Although the policy was enacted 15 years ago, debate about its form and effectiveness is still raging (two propositions on the November 2000 ballot in San Francisco failed to modify or overturn Proposition M's limits), and evidence about how the Bay Area economy adjusts to restrictions is still accumulating. For example, as demand for office space soared in the late 1990s, industrial buildings were converted to office space, and rapidly expanding industries such as internet technology companies defined themselves

⁷⁶ Landis, John D. "Do Growth Controls Work? A new assessment." *Journal of the American Planning Association*, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL.

⁷⁷ Porter, Douglas R. "Managing Growth in America's Communities." Island Press. Washington, D.C. 1997.

⁷⁸ Paul, Brad, "Proposition M and the Downtown Growth Battle", San Francisco Planning and Urban Research Association, July 1999. Available on-line at www.spur.org.

as manufacturing, business services, or research and development, which are exempt from the office space restrictions.

Employment Space Targets and Building Moratoriums

Employment space targets that focus on the economy and building moratoriums on non-residential development share many similarities to annual limits. Non-residential moratoriums will have more severe impacts than annual limits, because they stop construction activity, rather than decreasing it over time. Targets, once they have been reached, are for all purposes the same as a moratorium. The effects of these policies are similar to those described under the annual non-residential permit section.

Tying Growth to Infrastructure

Non-Residential Development Impact Fees

A non-residential development impact fee is a fee levied on the construction of new employment space. The fees are almost identical in nature to residential development impact fees. The implementation of non-residential fees enables jurisdictions to pay for additional public facilities and services required for servicing new development. Since the fees increase the cost of development, they may indirectly limit the economy's capacity to accommodate growth through discouraging development.

Non-Residential Adequate Public Facilities Ordinance

A non-residential adequate public facilities ordinance requires developers of employment space to provide certain infrastructure items. The requirement allows cities to pass some of the costs of infrastructure provision on to developers. Since the policy increases the cost of development, it may indirectly limit the economy's capacity to accommodate growth.

POLICIES THAT CHANGE THE REGION'S JOB MIX

Infrastructure Investment Focusing on High Value Added Industries

Changing the region's job mix would require infrastructure investments and public policies that favor high value added industry. To our knowledge, no jurisdiction has used this approach to slow growth. This policy reflects the fundamental recommendations included in the San Diego Regional Economic Prosperity Strategy (REPS).⁷⁹ However, the intention of the REPS was not to reduce population growth, but to increase the region's standard of living.

Changing the region's job mix to create more high value added jobs is a strategy that requires regional collaboration and a more balanced approach in choosing which major infrastructure investments are funded, given limited public resources. Over time, the balanced infrastructure investment approach would influence the composition of the job mix. A balanced public policy and investment strategy results in a more diversified and competitive region. Some of these policies and investments are listed below:

- Improve access to world markets
- Improve K-12 education, workforce training, and access to life-long learning programs
- Reduce the cost of doing business
- Assure adequate water and energy supplies
- Solve hazardous waste storage location issue
- Make housing affordable
- Provide sufficient urban land for housing and employment needs
- Attract sufficient venture capital resources
- Encourage collaborative regional problem solving

Despite a better balance between high and low value added job growth, the region would continue to add diverse employment opportunities for people of all income and educational levels. High value added industries do include low skilled jobs, and would continue to require support from jobs with lower skill and education requirements. However, the region would actively seek more middle income jobs by retaining those jobs that add to overall economic prosperity while not contributing as much to population growth.

⁷⁹ For more information regarding strategies designed to change the region's job mix, refer to SANDAG, "San Diego Regional Economic Prosperity Strategy: Creating Prosperity for the San Diego Region." July 1998.

Annual Payroll Tax

A regional payroll tax requires local businesses to pay a percentage of their payroll to local government. A payroll tax has the potential to slow growth because it increases the cost of doing business, thereby making the region less competitive. This policy could potentially reduce some amount of employment and population growth in the region because it discourages local business from hiring additional employees and discourages employment-related migration. However, the ability to slow population growth depends largely on how the tax revenue is used. If the tax benefits the region, the growth-slowing ability of the tax is offset and growth rates may not be affected.

POLICIES THAT ALLOCATE OR PROMOTE GROWTH

Allocating Growth

Urban Growth Boundaries and Limit Lines

An urban growth boundary (UGB) is a line drawn around a jurisdiction to define the limits of urban growth. The boundary creates a clear edge where urban-scale development can and cannot occur. Expansions of the boundary may occur over time. UGBs are explicit attempts to channel and allocate growth based on a series of goals or parameters created by the jurisdiction imposing the boundary.

A typical UGB differs from a housing unit restriction because it encourages and allows higher densities, and does not specifically limit the amount of development. Growth boundaries address urban form and protection of the environment and agriculture, but do not address the adequacy of public facilities or fiscal impacts of growth. Although UGBs address urban form, they only do so within their political boundary. As a result, they have the potential to contribute to sprawling development beyond their jurisdictional boundaries.

An urban limit line is similar to a growth boundary in that it determines what land can and cannot be urbanized based on a line or edge around the jurisdiction. Limit lines tend to be more rigid than growth boundaries and are more difficult to extend. An urban services area is also similar to a growth boundary, except the urban services area is a line that represents the extent to which a jurisdiction or utility company will provide public services (such as water, electricity, roads, etc.). Urban service areas are determined using information about the cost effectiveness of extending infrastructure and services. Urban service areas do not channel growth, they simply require that market forces or other factors make service extension cost effective. The "Priority Funding Areas" designated by the State of Maryland are an example.

Growth phasing is somewhat like a growth boundary and an adequate public facility ordinance, but is less stringent and differs in practice. Growth phasing regulates the timing and location of new development, generally based on land constraints and the availability of infrastructure and services. Unless the program is combined with limits on

density or other restrictions, it will not necessarily slow growth, only determine its location. Growth phasing does not ensure adequate capacity to serve new development, and may add complicated steps to the permitting process.

Identifying where development can and cannot occur has become increasingly popular as a growth management tool. Space management is relatively new to American land use planning, but has been used in other countries for some time. For example, the British Green Belt program, which restricts the growth of cities to preserve agricultural land and prevent urban sprawl, has been in effect for many years. Delineating or allocating growth is relatively effective at protecting habitat and open space, and has become popular with conservationists and environmentalists.

Using a growth boundary or limit line to reduce population seems reasonable. Restricting the amount of developable land may reduce the region's ability to accommodate more jobs and people. As with other policies, the region can adjust to and weaken the restrictions. A growth boundary allows development within a specified area but does not stop construction activity. As a result, population growth is less sensitive to the policy. Also, if the boundary allows density increases, population reductions may be further weakened.

There is no guarantee that boundaries will provide a rational plan for future growth and urbanization. In fact, they may push growth to other communities and increase leapfrog and sprawling development. In the Twin Cities area of Minnesota, analysts have found increasing levels of leapfrog development after the creation of an urban services boundary.⁸⁰

Growth boundaries and limits may exacerbate the imbalance of job growth to housing growth by increasing the value of developable land within the area. Limiting the supply of developable land pushes land prices upward. This creates additional pressure to develop remaining land to its "highest and best use," which is primarily determined by the use that will be able to afford the highest rent.⁸¹ Commercial, office, and industrial land uses are able to pay higher rents, on average, than residential uses (especially lower priced and affordable residential uses). The price increase benefits landowners within the boundary and harms those who own land outside of it. It also makes affordable housing more difficult to develop.

The Portland Case

The following is an overview of the existing body of literature on the impacts of growth boundaries, using Portland, Oregon's regional growth boundary as an example. In

⁸⁰ Bolan, Richard. Luce, Thomas. Kin Lam, Hin. "Can Urban Growth be Contained?" APA Conference Proceedings, San Diego 1997. Available at www.asu.edu/caed/proceedings97/bolan.html.

⁸¹ These concepts are part of basic urban economic theory, as explained in O'Sullivan, Arthur. "Urban Economics." Irwin: New York. Third Edition, 1996.

Oregon, local land use regulations and decisions must be consistent with state-approved goals that require incorporated municipalities to adopt urban growth boundaries. Local governments must create lines that determine which areas can urbanize and which cannot. The lines are created based on a set of need and location factors. The need factors are meant to accommodate projected increases in population, housing, and employment. The location factors deal with the efficiency of land use goals, compatibility of surrounding land uses, and natural resource and other preservation. The state goals do not require a method for allocating development within the boundary.

Portland's growth boundary is an example of a regional growth boundary surrounding 24 incorporated cities. Overseen by Metro, the regional planning agency, the boundary intends to limit sprawl and protect the environment. The boundary has been expanded more than thirty times and added nearly 5000 acres over the last two decades. In Portland, there has been more development within the boundary than outside of it, and the region provides incentives for this to occur. Densities have also increased, although not as much as anticipated. One of the reasons why development has not occurred at high densities is that neighborhood opposition to higher density development has become increasingly common.⁸² Some older, established neighborhoods have been revitalized by infill and investment, yet home prices have risen and housing affordability problems have worsened. Whether these trends are directly related to the growth boundary is somewhat unclear, and is the source of many disagreements over the boundary's merit.

A significant problem in the Portland UGB program is how to decide where development should occur within the boundaries and at what densities. While many people favor and prefer low-density development, this preference increases pressure to extend the boundary, which is contrary to the goals of the policy. Higher densities reduce the demand for boundary expansion, but meet with neighborhood opposition. In addition, many commuters live in nearby Washington State communities, which are not participants in Oregon's boundary laws. Pushing residential growth outward to areas beyond the growth boundary encourages the development of suburban job centers.

Because of the constrained supply of land and potentially greater costs of building at higher densities, developers have become somewhat disillusioned with the urban growth boundary program.⁸³ At the same time, however, they enjoy the certainty of knowing what can and cannot be developed, which reduces costs. The UGB has also sped up the efficiency of the permitting and development process, saving time and money for developers. In sum, there have been a variety of impacts from the Portland growth boundary, some good and some bad.

⁸² Mandelker, Daniel R. "Managing Space to Manage Growth." William and Mary Environmental Law and Policy Review. Vol. 23 pp. 801. 1999.

⁸³ Mandelker, Daniel R. "Managing Space to Manage Growth." William and Mary Environmental Law and Policy Review. Vol. 23 pp. 801. 1999.

Similarities between the Portland and San Diego regions suggest that lessons learned in Oregon may also apply here. Both regions grew in the 1990s as their economies diversified toward greater reliance on high technology industries. Portland has an urban growth boundary and the San Diego region has species and habitat conservation areas where growth is restricted. Both regions have strong commitments to the environment, but feel pressure to grow outward and develop vacant land at the fringes. Both regions have growth outlets that absorb some of the demand for housing. Workers in Portland can commute from communities in Washington State outside of the urban growth boundary, and San Diego workers can commute from Southwestern Riverside, Orange County, and Baja California. These are market adjustments over which local government has little or no control.

Promoting Growth

A variety of factors work against any strategy designed to lower the rate of population growth and there are many reasons why our region retains and attracts people. The San Diego region is a desirable location with a growing economy and relatively high quality of life. While natural increase and foreign immigration are causes of growth that are relatively unaffected by local policies, a number of other growth factors are the result of local policies and attributes of the region. In fact, many of the characteristics that attract new people to a region are the same characteristics that make the region a nice place to live and work. Job opportunities, good climate, natural amenities, arts and entertainment, and more all contribute to increases in population.

Other factors also contribute to growth. Aggressive efforts to promote economic development and a successful visitor industry fuel the growth of the regional population. The ironic fact is that the more effective the region is at preserving its quality of life and promoting its assets, the greater the pressures for growth. However, while quality of life factors do contribute to growth, rapid increases (or decreases) in population growth are usually attributable to economic opportunities.

Policies that encourage economic development work against growth slowing policies because they can increase demand for domestic migration related to employment opportunities. That there is a separation for many people between population growth and economic development is understandable. Public agencies want the tax receipts generated by economic expansion, and most of their constituents want jobs, pay raises, and advancement opportunities. Further, there seems to be widespread public support for projects that pour dollars into the regional economy, including convention center expansions, Super Bowl games, large visitor attractions, cruise ship lines, and foreign trade zones, to mention a few. There does not seem to be, however, as much enthusiasm for the additional population that accompanies the influx of dollars and employment growth. All of this suggests the need for the planning and decision-making process to better incorporate the tradeoffs involved with any new policy intended to slow population growth.

SANDAG's previous studies on growth slowing policies described the potential impacts of eliminating growth promotion policies in the region.⁸⁴ Industrial promotion and marketing, visitor industry investments and promotion, and other economic development and public policies designed to attract companies, workers, and tourists were cited as contributing to population growth. The exact degree to which these policies and programs contribute to the region's population growth was not determined. However, the reports claim that they bolster the region's major employment sectors and represent a major public investment in economic growth. According to the report, eliminating or reducing these policies has the potential to slow population growth in the region. However, the reduction in population comes at the cost of a series of adverse economic impacts, including high levels of unemployment, fewer job opportunities, and lower per capita income. The region chose not to eliminate these policies, and public support for them remains strong.

SECTION IV: GROWTH IN THE SAN DIEGO REGION

⁸⁴ "Causes of Growth and Possible Control Measures in the San Diego Region." SANDAG. September, 1987.

Section IV

GROWTH IN THE SAN DIEGO REGION

This section examines the region's population, housing, and economic growth over the last 20 years and summarizes SANDAG's 2050 Regional Growth Forecast and the extended San Diego Forecast through 2094.

POPULATION GROWTH

Between 1980 and 2000, the San Diego region added 452,000 residents. This growth, from under 3.0 million persons in 1980 to more than 3.5 million in 2000, increased the region's population by 51 percent. In the same 20-year period, the U.S. population increased by 24 percent and California's population by 42 percent. In the 1990s, the region added over 600,000 people in ten years. Population growth slowed during the recession of the early 1990s. So far, the region added over 250,000 people between 1990 and 2004.¹⁰

When the 2050 Regional Growth Forecast was released in July 2004, the population increase forecast by SANDAG was close to one million, leading to the widely quoted "million more people by 2050."

SANDAG has produced histories of population, housing, and economic activity for the San Diego region for more than 20 years. The process used to develop the Regional Growth Forecast uses a variety of factors to better understand the future sources of change in the region.¹¹ These factors include birth rates, the ethnic and age profile of the population, job growth, regional infrastructure, education characteristics, and land land use policies. The forecasts are used by SANDAG, its member agencies, and various other public and private sector organizations for planning activities that require information about population, housing, the economy, and land use.

SECTION IV: GROWTH IN THE SAN DIEGO REGION

¹⁰ Population estimates and projections in this paragraph are based on the most recent SANDAG census. The information in the remainder of this section does not incorporate the 2010 census, but instead uses population estimates prepared by the U.S. Department of Commerce, which are consistent with the historic trend and the general trend of the population.

¹¹ For specific information about the Regional Growth Forecast methodology and assumptions, refer to chapter 4p.4.

Section IV

GROWTH IN THE SAN DIEGO REGION

This section examines the region's population, housing, and economic growth over the last 20 years and summarizes SANDAG's 2020 Regionwide Forecast and the extended baseline forecast through 2050.

POPULATION GROWTH

Between 1980 and 2000, the San Diego Region added 952,000 residents. This growth, from under 1.9 million persons in 1980 to more than 2.8 million in 2000, increased the region's population by 51 percent. In the same 20-year period, the U.S. population increased by 24 percent and California's population by 43 percent. In the 1980s the region added over 600,000 people in ten years. Population growth slowed during the recession of the early 1990s. Still, the region added over 300,000 people between 1990 and 2000.⁸⁵

When the 2020 Regionwide Forecast was released in July 1998, the population increase forecast by 2020 was close to one million, leading to the widely quoted "million more people by 2020."

SANDAG has produced forecasts of population, housing and economic activity for the San Diego region for more than 25 years. The process used to develop the Regionwide Growth Forecast uses a variety of factors to better understand the future course of change in the region.⁸⁶ These factors include birth rates, the ethnic and age profile of the population, job growth, economic restructuring, migration characteristics, and local land use policies. The forecasts are used by SANDAG, its member agencies, and various other public and private sector organizations for planning activities that require information about population, housing, the economy, and land use.

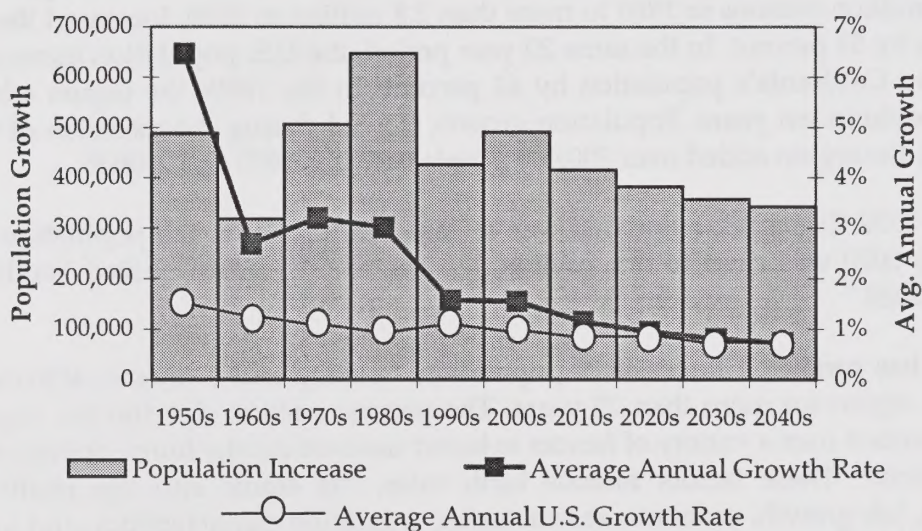
⁸⁵ Population numbers and growth rates in this paragraph are based on the results of the recently released 2000 Census. The information in the remainder of this section does not incorporate the 2000 census, but instead uses population estimates prepared by the State Department of Finance, which are consistent with the baseline forecast and the parameters of the simulations.

⁸⁶ For specific information about the Regionwide Forecast model structure and assumptions, refer to Appendix A.

The 2020 Regionwide Growth Forecast for the San Diego region mirrors the generally optimistic assumptions about the national economy. Local population, employment and income are expected to grow steadily. The region will see an average annual population increase of 45,400 between 2000 and 2020.

Growth rates in the region have been decreasing in recent decades, and this trend continues in SANDAG's forecast, as illustrated by the line in Figure 4. Furthermore, the difference between national and regional growth rates has been narrowing. The growth forecast in the region between 2000 and 2020 is somewhat faster than growth forecast for the U.S. (1.4% average annual growth in the region compared with 0.8% in the U.S.), but the growth rates should converge in the future if long-term trends continue. An extension of the regionwide forecast from 2020 to 2050 based on long-term trends suggests that U.S. and regional growth rates will converge at about 0.7 percent average annual growth in 2050. In this extended forecast, the region adds more than one million more people between 2020 and 2050, for a 2050 forecast of over 4.9 million.⁸⁷

Figure 4
Population Growth by Decade
San Diego Region, 1950-2050



Sources: U.S. Census Bureau, California Department of Finance, SANDAG 2020 Regionwide Forecast, SANDAG extension of forecast from 2020 to 2050. The forecast from 2020 to 2050 is not an official SANDAG forecast.

⁸⁷ The population forecast was extended to 2050 to provide context for discussion of growth in the region. The forecast from 2020 to 2050 is not an official SANDAG forecast.

COMPONENTS OF POPULATION CHANGE

All changes in population fall into two categories, natural increase and migration. Natural increase, the number of births minus the number of deaths, is easy to quantify from public health department data. Net migration, the number of people moving into an area minus the number of people moving out, is more difficult to accurately track since people are not required by law to report changes in residence. One way to measure migration is to subtract natural increase from population change. The residual is an estimate of net migration. Net migration includes both international migration (migration between the San Diego region and other countries) and domestic migration (migration between the San Diego region and other parts of California and the U.S.).

Accounting for population change, births, and deaths between 1980 and 2000, 49 percent of the region's growth was due to natural increase, while 51 percent was attributable to migration. In the forecast from 2000 to 2020, natural increase accounts for 65 percent of the region's growth, and net migration accounts for 35 percent.⁸⁸ In the extension of the forecast from 2020 to 2050, 81 percent of population growth is due to natural increase and 19 percent is due to net migration.⁸⁹ With more population increase due to natural increase, fewer migrants are needed to meet the demands of the labor force. The components of change for each of the periods are illustrated by the pie charts in Figure 5.

⁸⁸ Some of the natural increase is due to migration that occurs during each period, so the actual contribution of migration to population increase is higher than these figures reveal. To measure the impact of migration on natural increase, we simulated a growth forecast in which there was zero net migration of the civilian population. A comparison of births and deaths from this simulation with the SANDAG 2020 Regionwide Growth Forecast showed that the total contribution of future migrants to 2000 to 2020 population growth is 47 percent. Net migration accounts for 35 percent of population growth and the natural increase associated with the net migration accounts for 12 percent.

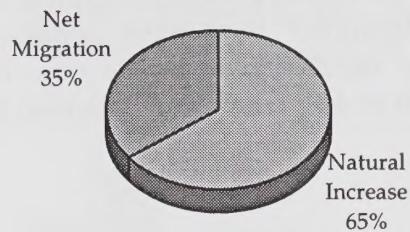
⁸⁹ The forecast extension through 2050 is based on the share of the U.S. population, as illustrated in Appendix B. Natural increase and net migration were not used to develop the forecast, but were calculated from the 2020 to 2050 population change, using the assumption that fertility and mortality rates remain at their 2020 levels.

Figure 5
Components of Change
San Diego Region, 1980-2050

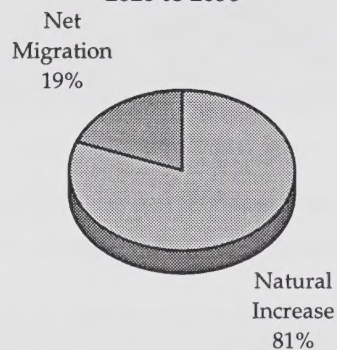
1980 to 2000



2000 to 2020



2020 to 2050

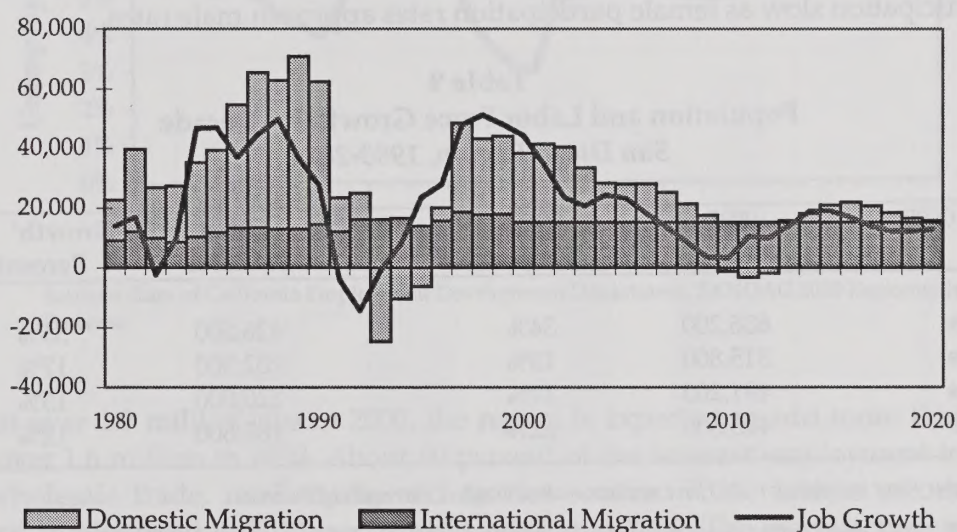


Source: SANDAG. 1980 to 2000 chart based on data from State of California Department of Finance and State of California Department of Health Services. 2000 to 2020 chart based on SANDAG 2020 Regionwide Forecast. 2020 to 2050 chart based on SANDAG extension of forecast from 2020 to 2050. The forecast from 2020 to 2050 is not an official SANDAG forecast.

POPULATION AND THE ECONOMY

Even though much of the region's overall growth is due to natural increase, population growth accelerates during periods of rapid economic growth, and slows during economic downturns. Growth in employment continues to attract and allow people to remain in the region, and exerts a strong influence on the level of domestic in-migration. The response of domestic migration to economic changes is very direct, as shown in Figure 6. When employment growth in the region is rapid, the unemployment rate tightens, and much of the demand for an expanded labor force is filled through migration. Annual net domestic migration flows are positive and large during periods of economic expansion, as in the late 1980s and late 1990s. During recessions or periods of slower growth, as in the early 1990s, net domestic migration flows are smaller, or negative. Foreign immigration, on the other hand, does not appear to be as sensitive to fluctuations in the local economy, as shown in Figure 6.

Figure 6
Migration and Job Growth
San Diego Region, 1980-2020



Sources: California Department of Finance, California Employment Development Department, SANDAG 2020 Regionwide Growth Forecast.

In the past, when the labor force was growing rapidly and the unemployment rate was higher than it is today, one of the primary goals of regional economic development policies was to create more employment opportunities by adding jobs.

Unemployment is currently low, and is expected to remain low over the next twenty years.⁹⁰ When the unemployment rate is low, creating a rising standard of living is more important than simply adding jobs. A strategy to encourage the growth of high-paying jobs, and to prepare the labor force to fill those jobs, is needed. If the region's labor force is not prepared for jobs that require more skills and education, employers will have to hire a greater share of their work force from beyond the region, contributing to additional population growth.

Unlike the 1970s and 1980s, when the labor force grew at a faster rate than overall population, labor force growth in the 1990s slowed along with the population growth. The rate of growth in the labor force far exceeded the rate of growth in population in the 1980s, as shown in Table 9. In the 1980s, the youngest members of the large baby boom generation joined the labor force. Also in the 1980s, female participation in the labor force increased.

Since 1990, the region's population and labor force have grown at similar rates. Between 2000 and 2020, this balance between population and labor force growth is expected to continue. Labor force growth slows in the forecast period, because growth in the adult population slows, a larger number of people reach retirement age, and increases in labor force participation slow as female participation rates approach male rates.

Table 9
Population and Labor Force Growth by Decade
San Diego Region, 1980-2020

	Population Growth		Labor Force Growth ¹	
	Number	Percent	Number	Percent
1980s	636,200	34%	426,500	55%
1990s	315,800	13%	202,300	17%
2000s	491,200	17%	220,000	15%
2010s	415,600	12%	189,800	12%

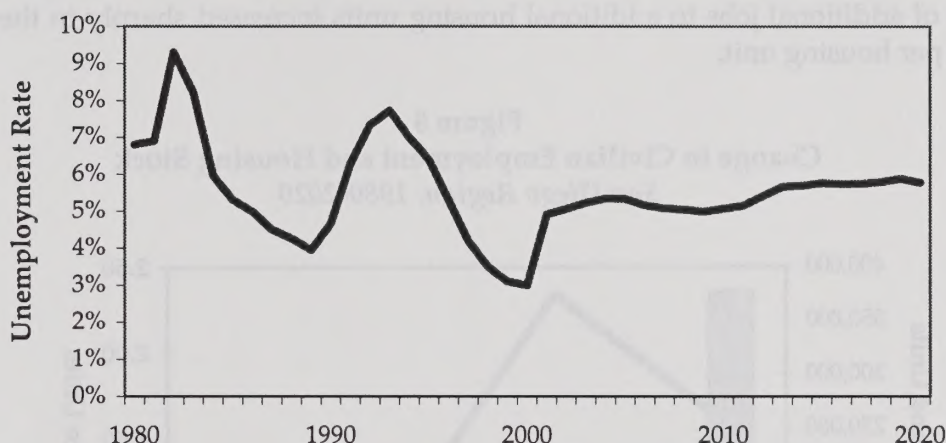
¹ Labor Force estimates for 2000 have not been revised to reflect the results of the census.

Sources: U.S. Census Bureau, State of California Employment Development Department, SANDAG 2020 Regionwide Forecast.

⁹⁰ According to the California Employment Development Department, Labor Market Information Division, the average annual unemployment rate for the San Diego region in 2000 was 3.0 percent. The national unemployment rate is expected to average 4.1 percent between 2000 and 2025, according to DRI Economic Research. "DRI's The U.S. Outlook: The U.S. Economy." Standard & Poor's DRI Economic Research. McGraw Hill Publishing, Lexington MA. Summer 2000. During the past 30 years, the San Diego region's unemployment rate has fluctuated with the national rate, remaining within one percentage point of the U.S. rate in most years. The difference between U.S. and regional unemployment rates has not exceeded two percentage points since 1976.

In 2000, the annual average unemployment rate in the San Diego region was 3.0 percent, the lowest annual rate since 1956. The rate has decreased each year since its recent peak of 7.7 percent in 1993.⁹¹ Since 1995, the unemployment rate has been lower in the San Diego region than in the state and the nation. Figure 7 shows a downward trend in unemployment rates interrupted by the recession of the early 1990s. Forecast unemployment rates are higher than the 2000 rate (the forecast only incorporates historical data through 1997), but low by historical standards. The 2001 to 2020 forecast unemployment rates in the region fluctuate between 4.9 and 5.8 percent.

Figure 7
Average Annual Unemployment Rate
San Diego Region, 1980-2020



Sources: State of California Employment Development Department, SANDAG 2020 Regionwide Forecast.

From just over 1.3 million jobs in 2000, the region is expected to add more than 300,000 jobs, to over 1.6 million in 2020. About 60 percent of the forecast employment increase is in the wholesale trade, retail trade, and service sectors. These sectors account for 53 percent of employment in 2020, up from 51 percent in 2000. The manufacturing sector is expected to contract by 5,000 jobs, and shrink from 10 percent of regional employment in 2000 to eight percent in 2020. Compensating for the decline in traditional durable goods manufacturing, employment clusters such as business services, biotechnology, software and communications will expand employment and output between 2000 and 2020, continuing to drive the region's economic growth.

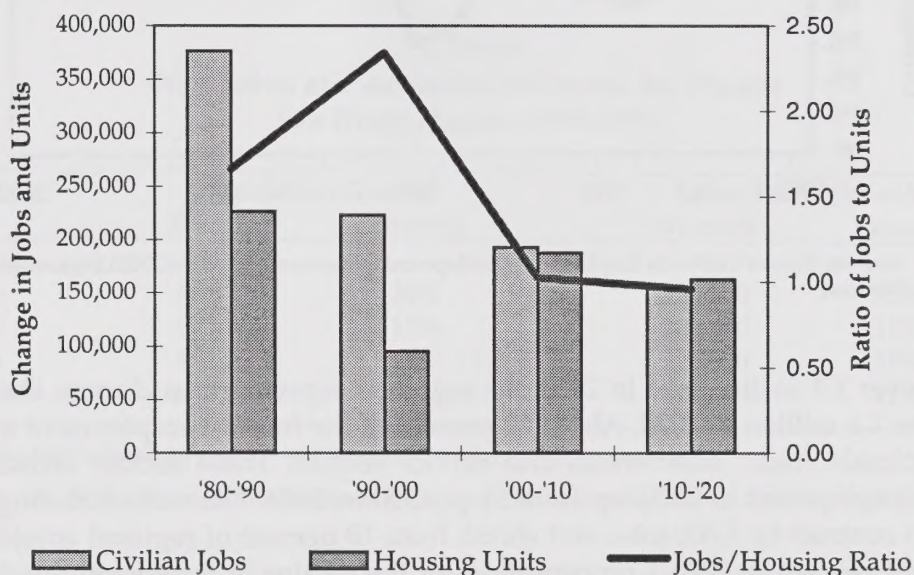
⁹¹ California Employment Development Department, San Diego MSA Annual Average Industry Employment, 1983 to 2000, March, 2001.

HOUSING

Between 1980 and 2000, the San Diego Region added 320,000 housing units. Figure 8 shows that most of these units were added in the decade between 1980 and 1990. Nearly half of the growth in the 20-year period occurred between 1985 and 1989, when an average of over 31,000 homes was built annually. For each new home built between 1980 and 1990, 1.66 jobs were added.

In the early 1990s, the severe recession slowed population and job growth, and housing demand eased. In sharp contrast to the late 1980s, the average annual increase in housing units between 1993 and 1997 was less than 7,000. After 1996, job growth resumed, but housing growth did not keep pace, and average home prices soared by 35 percent between 1996 and 2000, even after adjusting for inflation.⁹² As the line in Figure 8 shows, the ratio of additional jobs to additional housing units increased sharply in the 1990s, to 2.34 jobs per housing unit.

Figure 8
Change in Civilian Employment and Housing Stock
San Diego Region, 1980-2020



⁹² Semiannual survey of single family, detached, existing housing prices, Economic Research Bureau, San Diego Regional Chamber of Commerce. Published in *Economic Bulletin Housing 2000*.

To accommodate the population increase expected between 2000 and 2020, 350,000 additional housing units are required.⁹³ During the period, the ratio of additional jobs to additional housing units is 1.00, less than half of the ratio observed between 1990 and 2000. Although job growth is slower in the forecast period than it was in the past twenty years, the demand for additional housing units remains high. Two reasons for this are that the increase in labor force participation slows, and that a larger share of the population is over age 65. Growth in the labor force will largely come from young adults entering the labor force and people moving here, rather than from the existing adult population entering the labor force. These young adults and in-migrants also create demand for new housing units. The population 65 and over require housing, but fill very few jobs, so as the senior population rises, the jobs to housing ratio should decrease.

⁹³ Household headship rates by age group, sex, and ethnicity measure the probability of individuals forming households. Using the baseline assumption that these rates will change very little between 2000 and 2020, the forecast population growth will result in new households being formed, requiring about 350,000 additional housing units.

Section V

CONCLUSION

Whether or not the pace of growth is correctly stated as “a million more people by 2030” does not matter. At least for the immediate future, the region will continue to grow. Even if people choose to live outside the region’s political boundary, they will continue to be a part of the region, using our roads, ports, water and other infrastructure without paying as much in taxes as existing residents. An important point to remember, however, is that the growth will occur gradually. In fact, our rate of growth has slowed since the 1970s and will continue to slow in the future. Now is the time to implement a Regional Plan for managing and dealing with our growth.

Good management is of critical importance to the region’s future, and is a necessary step towards protecting the region’s quality of life. Quality of life is not determined by how many people live in a certain area. Rather, it is an inter-related function of many things: air quality, water quality, open space, mobility, urban design, adequate amenities and services, a strong economy, and other factors. An adequate growth management strategy is of vital importance regardless of how fast the region is projected to grow.

Finally, there is at least one very critical issue that requires legislative changes at the state level. California’s current state-local fiscal system is a major impediment to any policy designed to manage growth and has caused local jurisdictions to lose much of their earned state tax base and revenues. To reverse this trend, local jurisdictions need to be compensated for the additional services required by housing and growth. Improving the way we distribute revenues between the state and local jurisdictions would encourage affordable housing, improve the job housing imbalance, and encourage the growth of the most valuable contributors to economic prosperity. Fiscal reform is required to properly implement smart growth strategies and, ultimately, to provide revenue to pay for impacts of population growth.²⁸

SECTION V: CONCLUSION

²⁸ For more information on fiscal reform, visit us SACRALC.org/SmartGrowth/SmartGrowthinCalifornia. March, 2010.

Section V

CONCLUSION

Whether or not the pace of growth is correctly stated as “a million more people by 2020” does not matter. At least for the foreseeable future, the region will continue to grow. Even if people choose to live outside the region’s political boundary, they will continue to be a part of this region, using our roads, parks, water and other infrastructure without paying as much in taxes as existing residents. An important point to remember, however, is that the growth will occur gradually. In fact, our rate of growth has slowed since the 1980s and will continue to slow in the future. Now is the time to implement a Regional Plan for managing and dealing with our growth.

Growth management is of critical importance to the region’s future, and is a necessary step towards protecting the region’s quality of life. Quality of life is not determined by how many people live in a certain area. Rather, it is an inter-related function of many things: air quality, water quality, open space, mobility, urban design, adequate amenities and services, a strong economy, and other factors. An adequate growth management strategy is of vital importance regardless of how fast the region is projected to grow.

Finally, there is at least one very critical issue that requires legislative changes at the state level. California’s current state-local fiscal system is a major impediment to any policy designed to manage growth and has caused local jurisdictions to lose much of their control over tax rates and revenues. To reverse this trend, local jurisdictions need to be compensated for the additional services required by housing unit growth. Reforming the way we distribute revenues between the state and local jurisdictions would encourage affordable housing, improve the jobs housing imbalance, and encourage the growth of the most valuable contributors to economic prosperity. Fiscal reform is required to properly implement smart growth strategies and, ultimately, to provide revenue to pay for impacts of population growth.⁹⁴

⁹⁴ For more information on fiscal reform, refer to SANDAG, “Achieving Fiscal Reform in California.” March, 1999.

Appendix A

SANDAG'S REGIONWIDE GROWTH FORECASTS

2020 REGIONWIDE FORECAST MODEL STRUCTURE AND ASSUMPTIONS

Every three to five years since the early 1970s, SANDAG has produced a regionwide forecast of population, housing, and employment, looking 20 years or more into the future. Reliable long-range demographic and economic forecasts are needed by SANDAG, its member agencies, and various other public and private sector organizations for planning activities that require information about population, housing, the economy and land use. The official forecast is used in the preparation of water and air quality strategies, housing and environmental studies, and the Regional Transportation Plan. The baseline forecast referred to in this study is the 2020 Regionwide Forecast, which the SANDAG Board of Directors approved for use in July 1998.

2020 Regionwide Forecast: Model Structure

The computer model used by SANDAG to produce the 2020 Regionwide Forecast is the Demographic and Economic Forecasting Model (DEFM).⁹⁵ In general, the model is a synthesis of two widely used techniques. On the demographic side, the cohort-survival method is used. This method considers such factors as birth rates, death rates, and the age, sex and ethnic distribution of the resident population to forecast demographic variables. On the economic side, time-series/regression methods are used to estimate economic relationships. The resulting econometric equations provide forecasts of employment, income and other economic variables based on assumptions about national, state and local growth patterns, local inter-industry relationships, and the competitiveness of the region compared with the nation.

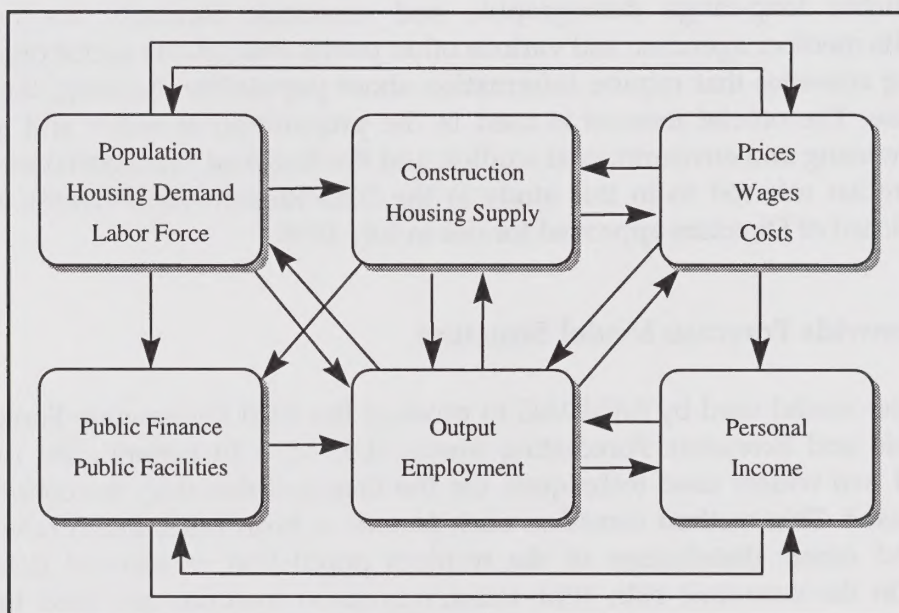
Domestic migration is determined econometrically. It is a function of local employment change, local wage rates relative to the U.S. wage rate, and local employment to population relative to the U.S. rate. International migration is a function of the U.S. international migration forecast and the region's historical share of U.S. international migration. Housing demand depends on household population and household headship rates (proportion of persons who are heads of households, stratified by age, sex, and

⁹⁵ For more information about DEFM, see *Demographic and Economic Forecasting Model, Volumes 1, 2, 3, and 4*, San Diego Association of Governments, May 1999.

ethnicity). The civilian labor force is a function of the civilian population and labor force participation rates.

DEFM is a simultaneous model, and most major variables are interrelated directly or indirectly. For example, the level of economic activity, as measured by employment or output, depends in part on the size of the local population and income levels. Income depends in part on employment and labor market conditions. Over time, the population responds to economic conditions through impacts on net migration levels. Thus, local activity depends on local population, but local population also depends on activity. This type of circularity is a central feature of simultaneous models, and the DEFM structure is designed to capture the main interdependencies and interactions that exist in a dynamic economy. The general flow of the relationships in DEFM is illustrated in Figure A-1.

Figure A-1
Sector Relationships in Demographic and Economic Forecast Model



2020 Regionwide Forecast: Demographic Assumptions

- Fertility rates for the three non-Hispanic ethnic groups remain at their 1990 levels.
- Hispanic fertility rates decline by 15 percent from 1990 to 2020 based on fertility trends in Mexico and an increasing share of Hispanic population that is U.S. native-born.
- Mortality rates follow trends used in the California Department of Finance (DOF) forecast for the State, which are consistent with modest increases in life expectancy for both males and females of all ethnic groups.

- Domestic net migration is distributed by age, sex, and ethnicity based on historical shares. Most domestic migrants into and out of the region are non-Hispanic White (70%) or Hispanic (20%).
- International migration is distributed by age, sex, and ethnicity based on historical shares. Most migrants into the region from outside the U.S. are Hispanic (40%) or non-Hispanic Asian and other (40%).
- Household headship rates dropped between 1980 and 1998, with a corresponding increase in persons per household. Headship rates decline an additional two percent between 1998 and 2010, then remain stable through 2020. This assumption implies that household size continues to increase, from 2.83 in 1998 to 2.86 in 2004, then declines modestly to 2.81 by 2020, primarily due to the aging of the population.

2020 Regionwide Forecast: Economic Assumptions

Long-range forecasts of the U.S. and California economies supply the overall direction for the local economy.⁹⁶ Specific assumptions for the U.S. and California economies include:

- U.S. economic growth is slower than in the past; annual real GDP growth averages 1.9 percent compared with 2.7 percent between 1972 and 1997.
- Inflation averages 3.7 percent annually during the forecast period.
- Energy price increases exceed overall inflation.
- The national unemployment rate averages 5.5 percent between 2001 and 2020.
- Labor force growth slows in the forecast period, because growth in the adult population slows, a larger number of people reach retirement age, and increases in labor force participation slow as female participation rates approach male rates.
- California's real gross state product grows at an annual rate of 2 percent through 2020.

Although the national and state economies influence the local economy, most of the economic detail in DEFM is specific to the San Diego Region. Most of the economic forecast is based on econometric estimation, but some specific assumptions for the region include:

- Price changes and unemployment rates remain close to the national rates.
- For most industrial sectors, changes in labor productivity mirror national trends.

⁹⁶ Data Resources Incorporated, *Review of the U.S. Economy, Long Range Focus*, Fall/Winter 1997-98; U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, *Projections of Income, Employment, and Gross State Product*, August 1997.

- To implement the Regional Economic Prosperity Strategy, labor productivity in selected high-wage industrial clusters is raised from the baseline assumptions to match or exceed U.S. productivity levels.

Residential Vacancy Rates

Residential vacancy rates in the 2020 Regionwide Forecast are comparable to those reported in the 1990 census and in annual estimates from the DOF. According to the 1990 census, the residential vacancy rate in the San Diego region on April 1, 1990 was 6.2 percent, a decrease from the 1980 rate of 7.0 percent. Since 1990, annual estimates produced by DOF have reported that the vacancy rate has remained at 6.2 percent. Other sources indicate that vacancy rates in the region increased after 1990, peaking in 1994 or 1995, and by the late 1990s had fallen below their 1990 levels.⁹⁷ Several private organizations and the U.S. Census Bureau conduct vacancy rate surveys in the region, but there are no annual surveys that measure vacancy in the same way as the decennial census. Therefore, official estimates of vacancy rates remained between 6.2 percent and 7.0 percent between 1980 and 1999.

Vacancy rates in the 2020 Regionwide Growth Forecast are relatively stable. They fluctuate between 5.4 percent and 6.1 percent, and are 5.6 percent in the year 2020. In the context of current reports of rental vacancy rates below one percent, the forecast vacancy rate may seem high. However, the forecast rates are *census-comparable* vacancy rates, not *market* vacancy rates. At the time that the census is conducted, every housing unit that is not currently occupied as a primary residence is considered vacant. That means that units that have been purchased or rented, but not yet occupied, are considered vacant, as are seasonal or temporary units that are occupied by persons who have a usual residence elsewhere. The highest vacancy rates within the region are in coastal communities, including Coronado, Del Mar, and Solana Beach. Units that are maintained as second homes are included in the region's housing stock, but are not counted as occupied, and no population is associated with these homes.

Recently released census data confirmed that residential vacancy rates had dropped to 4.4 percent in 2000.

Average Home Prices

The average home prices in the 2020 Regionwide Forecast and the policy simulations in this study are the average resale price of an existing single family detached home. The historical data is from the San Diego Regional Chamber of Commerce, and is published twice annually in their *Economic Bulletins*. The baseline forecast is from SANDAG's 2020

⁹⁷ For example: U.S. Census Bureau, Housing Vacancy Survey, available at <http://www.census.gov/hhes/www/hvs.html>, and MarketPoint Realty Advisors, published in San Diego Regional Chamber of Commerce, *Economic Bulletin, Housing 2000*.

Regionwide Forecast, and is based on the historical data through 1997. This is only one of many measures of housing prices, and does not include all homes within the region. However, this measure is used as an indicator for overall housing prices, since prices for new units, condominiums, and rental properties usually move in the same direction as existing single family units.

APPENDIX B: BASELINE AND U.S. RATE FORECASTS FOR THE SAN DIEGO REGION

Appendix B

BASELINE AND U.S. RATE FORECASTS FOR THE SAN DIEGO REGION

Table B-1
Population in the U.S. and San Diego Region, 1985-2050

Year	United States Population	San Diego Region Population			
		Baseline ¹ Population	Share ²	U.S. Share ³ Population	Share ⁴
1985	242,271,000	561,300	0.23%		
1990	250,000,000	634,000	0.25%		
2000	267,982,000	1,397,000	0.52%		
2010	297,251,000	1,870,500	0.63%		
2020	340,460,000	2,000,000	0.59%		
2030	370,000,000	2,045,000	0.55%	2,566,500	0.69%
2040	390,625,000	2,007,000	0.51%	3,200,000	0.60%
2050	410,000,000	1,950,000	0.48%	3,607,000	0.53%
2060	420,000,000	1,800,000	0.43%	3,707,000	0.49%
2070	420,000,000	1,700,000	0.40%	3,700,000	0.46%
2080	420,000,000	1,600,000	0.38%	3,600,000	0.44%
2090	420,000,000	1,500,000	0.36%	3,500,000	0.43%

¹ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

² San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

³ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

⁴ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

⁵ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

⁶ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

⁷ San Diego County Population Estimate Program: San Diego County Regional Council, 1985-2000; 2001-2010, San Diego County Regional Council; 2011-2050, San Diego County Regional Council; 2051-2090, San Diego County Regional Council.

APPENDIX B: BASELINE AND U.S. RATE FORECASTS FOR THE SAN DIEGO REGION

Appendix B

BASELINE AND U.S. RATE FORECASTS FOR THE SAN DIEGO REGION

Table B-1
Population in the U.S. and San Diego Region, 1950-2050

Year	United States ¹ Population	San Diego Region Population			
		Baseline ² Population	Share ⁴	U.S. Rate ³ Population	Share ⁵
1950	152,271,000	560,400	0.37%		
1960	180,671,000	1,049,000	0.58%		
1970	205,052,000	1,367,200	0.67%		
1980	227,225,000	1,873,300	0.82%		
1990	249,464,000	2,520,500	1.01%		
2000	275,306,000	2,946,500	1.07%	2,946,500	1.07%
2010	299,862,000	3,437,700	1.15%	3,209,300	1.07%
2020	324,927,000	3,853,300	1.19%	3,477,600	1.07%
2030	351,070,000	4,235,100	1.21%	3,757,400	1.07%
2040	377,350,000	4,592,200	1.22%	4,038,600	1.07%
2050	403,687,000	4,934,800	1.22%	4,320,500	1.07%

¹ U.S. Census Bureau, Population Division, Population Estimates Program, "Historical National Population Estimates: July 1, 1900 to July 1, 1999." June 2000. Available at <http://www.census.gov/population/estimates/nation/popclockest.txt>.

U.S. Census Bureau, Population Division, Population Projections Branch, "Annual Projections of the Total Resident Population as of July 1: Middle Series, 1999 to 2100." January, 2000. Available at <http://www.census.gov/population/www/projections/natsum.html>.

² Baseline San Diego region population as of July 1 for 1950 to 2020 from SANDAG, 2020 Regionwide Forecast. July, 1998. Forecast extended from 2020 to 2050 based on assumptions about the region's share of the U.S. forecast. The region's share increases after 2020, but at a decreasing rate, as shown in Table B-3.

³ "U.S. Rate" San Diego region population as of July 1 for 2000 to 2050 based on the assumption that the region will grow at the same rate as the U.S. between 2000 and 2050.

⁴ San Diego region's share of U.S. Population under the region's baseline forecast.

⁵ San Diego region's share of U.S. Population under the region's "U.S. Rate" forecast.

Table B-2
Average Annual Population Change in the U.S.
and San Diego Region, 1950-2050

Period	United States		SD Region Population		"U.S. Rate"
	Population	Percent	Baseline	Percent	
1950-1960	2,840,000	1.7%	48,860	6.5%	
1960-1970	2,438,100	1.3%	31,820	2.7%	
1970-1980	2,217,300	1.0%	50,610	3.2%	
1980-1990	2,223,900	0.9%	64,720	3.0%	
1990-2000	2,584,200	1.0%	42,600	1.6%	
2000-2010	2,455,600	0.9%	49,120	1.6%	26,280
2010-2020	2,506,500	0.8%	41,560	1.1%	26,830
2020-2030	2,614,300	0.8%	38,180	0.9%	27,980
2030-2040	2,628,000	0.7%	35,710	0.8%	28,120
2040-2050	2,633,700	0.7%	34,260	0.7%	28,190

Source: United States and San Diego region historical and forecast population shown in Table B-1.

Table B-3
Percentage Increase in Region's Share of U.S Population

Period	Baseline	"U.S. Rate"
1950-1960	0.213%	
1960-1970	0.086%	
1970-1980	0.158%	
1980-1990	0.186%	
1990-2000	0.060%	
2000-2010	0.076%	0.000%
2010-2020	0.039%	0.000%
2020-2030	0.020%	0.000%
2030-2040	0.011%	0.000%
2040-2050	0.005%	0.000%

Source: United States and San Diego region historical and forecast population through 2020 shown in Table B-1. Increases between 2020 and 2050 based on the relationship between the 2000 to 2010 and 2010 to 2020 increases.

Appendix C

POLICY SIMULATIONS

This following appendix includes calculations for the policy simulations described in this study. An impact simulation compares a baseline projection against an alternative. In this study, the 2030 Regional Growth Forecast is the baseline against which a 10-year growth alternative is compared.

SIMULATION: RESTRICTION ON HOUSING UNIT CONSTRUCTION

Table C-1
Restriction on Housing Unit Construction

Policy: An annual limit on new housing unit construction.

Because the 1990-2030 population requires population growth between 2020 and 2030 to be at least as great as the baseline forecast, the policy that would restrict construction to 40,000 units below the baseline level shown below. Additional discussion of this simulation is provided in Section 5.

Annual Housing Unit Policy	
Housing demand	1,101,339
Housing units below supply, 2020-2030 ¹	17,146
Policy Limit Annual Permits to 40,000 below baseline	
Annual housing limit	10,473
Units below 200 in 2020	20,000
Units as "physical"	20,000
2030 housing units	1,081,339
Housing shortfalls	20,000
Permits shortfalls	20,000

¹ Annual housing limit restricted by 20,000 units results in the "physical."

² All estimates of the housing shortage compiled since 1970, assuming no construction or already permitted housing units that is not built, projects the shortage, in the event of a housing emergency, that units are "physically."

³ Annual housing units 2020-2030 units below 200 in 2020.

⁴ Annual housing units 2020-2030 units below 200 in 2020.

continued

APPENDIX C: POLICY SIMULATIONS

Appendix C

POLICY SIMULATIONS

This following appendix includes calculations for the policy simulations described in this study. An impact simulation compares a baseline projection against an alternative. In this study, the 2020 Regionwide Growth Forecast is the baseline against which a slower growth alternative is compared.

SIMULATION: RESTRICTION ON HOUSING UNIT CONSTRUCTION

Table C-1
Restriction on Housing Unit Construction

Policy: An annual limit on new housing unit construction.

Because the target 2020 population requires population growth between 2000 and 2020 to be 40 percent slower than the baseline forecast, this policy limits annual housing construction to 40 percent below the baseline level shown below. Additional discussion of this simulation is provided in Section II.

Annual Housing Limit Policy	
Baseline housing demand	1,404,231
Baseline units built annually, 2000-2020	17,338
Policy: Limit Annual Permits to 40 Percent below Baseline	
Annual housing limit	10,403
Units added, 2000 to 2020 ¹	208,060
Units in "pipeline" ²	24,000
2020 housing units ³	1,265,540
Numeric shortfall ⁴	138,691
Percent shortfall ⁴	9.9%

¹ Annual housing limit multiplied by 20. This total includes units in the "pipeline."

² An estimate of the number of units completed since 2000, currently under construction, or already permitted, based on current level of 16,000 units permitted annually. In the event of a housing moratorium, these units are "grandfathered."

³ Baseline housing units in 2000 plus units added, 2000 to 2020.

⁴ Shortfall compares 2020 housing units in simulation with baseline housing units.

continued...

Table C-1
Restriction on Housing Unit Construction

2020 Interregional Commute Adjustment		
Ratio of additional commuters into region to total housing unit shortfall ¹ :		0.345
	Baseline	Policy
Baseline in-commuters	143,254	143,254
Additional in-commuters ²	0	47,911
Employed residents per housing unit ³	1.234	1.234
Housing units ⁴	0	38,819
Total in-commuters	143,254	191,165
Baseline population to labor force ratio	1.99	1.99
Population associated with additional in-commuters ⁵	0	95,494

¹ Based on trends observed between 1980 to 2000.

² Housing shortfall multiplied by 0.345.

³ Baseline forecast of employed residents divided by total housing units in 2020.

⁴ Number of housing units occupied by additional in-commuters (47,911 divided by 1.234).

⁵ This population growth (workers living outside the region times the population to labor force ratio) occurs outside of the region's boundaries under a housing limit policy.

continued...

Table C-1
Restriction on Housing Unit Construction

2020 Household Size and Vacancy Rate Adjustment		
	Baseline	Policy
Housing units	1,404,231	1,265,540
Vacancy rate ¹	5.6%	2.9%
Households	1,325,652	1,229,444
Persons per household limit ²	2.81	2.95
Adjusted household pop. ³	3,727,763	3,625,936
Numeric difference from baseline		-101,827
Group quarters population	125,534	125,534
2020 adjusted population ³	3,853,297	3,751,470
Numeric difference from baseline		-101,827

¹ In this simulation, the vacancy rate forecast in 2020 is 2.6 percent lower than the rate forecast in 2000. This difference is equal to the vacancy rate decrease between 1980 and 2000. The resulting vacancy rate is comparable to the vacancy rate reported by the 2000 Census in several Bay Area counties, including Santa Clara (2.3%), San Mateo (2.5%), Contra Costa (2.9%), Solano (3.1%), and Alameda (3.1%).

² In this simulation, average household size in 2020 is not allowed to increase by more than 0.11 persons higher than the forecast in 2000. This difference is equal to the household size increase between 1980 and 2000. The resulting household size is lower than the 2000 household size in all other Southern California counties, including Imperial (3.33), San Bernardino (3.15), Ventura (3.04), Orange (3.00), Los Angeles (2.98), and Riverside (2.98).

³ Under the policy, this adjusted 2020 population does not include population growth occurring outside of the region due to the interregional commute adjustment.

2020 San Diego Region Population		
	Baseline	Policy
Households	1,325,652	1,229,444
Persons per household	2.81	2.95
Household population	3,727,763	3,625,936
Group quarters	125,534	125,534
Total population	3,853,297	3,751,470
Numeric difference from baseline		-101,827
Forecast 2000 population	2,946,545	2,946,545
2000-2020 change	906,752	804,925
Percent difference from baseline		-11%

continued...

Table C-1
Restriction on Housing Unit Construction

Average Home Price in 2000 dollars		
Housing price elasticity ¹	2.6681	
	Baseline	Policy
2000 housing units	1,057,480	1,057,480
2020 housing units	1,404,231	1,265,540
Commuter housing units ²		38,819
Adjusted 2020 housing units ³		1,304,359
Numeric difference		-99,872
Percent difference		-7.1%
2000 average price (\$2000)	\$318,878	\$318,878
2020 average price (\$2000) ⁴	\$371,084	\$441,501
Numeric difference		\$70,417
Percent difference		19.0%

- ¹ Percent change in real housing prices divided by percent shortfall in housing units, based on the number of housing units expected in the San Diego region in 2000 using the region's 1980 household size and vacancy rate. The actual number of housing units in 2000 was 6.5 percent lower than the expected number of units. Average housing prices were 17.4 percent higher in 2000 than in 1980, after controlling for inflation.
- ² Number of housing units occupied by additional in-commuters (47,911 divided by 1.234). These units are shifted beyond the region, but are still part of the region's housing market for purposes of calculating upward pressure on prices.
- ³ Includes the housing units occupied by the additional in-commuters.
- ⁴ Average price under the policy is 19.0 percent higher than the baseline, calculated by applying the housing price elasticity to the -7.1 percent difference in housing units under the policy.

continued...

Table C-1
Restriction on Housing Unit Construction

2050 Extension of Policy			
	Baseline	Policy	Limit ¹
Housing units ²	1,805,626	1,577,630	
Numeric shortfall ³	0	227,996	
Additional in-commuters ⁴	0	78,761	
Population adjustment ⁵	0	156,983	
Population	4,934,800	4,777,817	
Group quarters ⁶	141,469	141,469	
Household population	4,793,331	4,636,348	
Households	1,704,585	1,532,632	
Vacancy rate	5.6%	2.9%	
Persons per household	2.81	3.03	3.06

¹ In this simulation, average household size in 2050 is not allowed to increase by more than 0.11 persons from its 2020 level. See 2020 household size adjustment above for more discussion.

² Baseline value from extended population forecast, assuming vacancy rates and household size are unchanged from 2020. Policy value extends annual housing limit policy to 2050.

³ Baseline housing units minus housing units under policy extension.

⁴ Housing shortfall multiplied by 0.345, as above.

⁵ This population growth occurs outside of the region's boundaries under a housing limit policy. It includes population associated with the interregional commute adjustment and population-serving jobs.

⁶ Assumes that group quarters population grows at the same increment between 2020 and 2050 as it did between 1990 and 2020.

continued...

Table C-1
Restriction on Housing Unit Construction

2020 Summary Information¹			
	Baseline	Policy	Difference
Population	3,853,300	3,751,500	-101,800
Household Population	3,727,800	3,625,900	-101,900
Housing Units	1,404,200	1,265,500	-138,700
Households	1,325,700	1,229,400	-96,300
Persons per Household	2.81	2.95	0.14
Residential Vacancy Rates	5.6%	2.9%	-2.7%
Civilian Jobs	1,627,800	1,627,800	0
Per Capita Income (\$2000)	\$34,100	\$34,100	\$0
Unemployment Rate	5.8%	5.8%	0.0%
Commuters into Region	143,300	191,200	47,900
Non-Residential Vac. Rate	5.2%	5.2%	0.0%
Avg. Home Price (\$2000)	\$371,100	\$441,500	\$70,400
Ratio of PH to YPHH ²	3.87	4.39	0.52

¹ For a more detailed explanation of the simulation, please refer to Section II of the study.

² Ratio of Average Home Price to Average Income per Household.

2050 Summary Information¹			
	Baseline	Policy	Difference
Population	4,934,800	4,777,800	-157,000
Household Population	4,793,300	4,636,300	-157,000
Housing Units	1,805,600	1,577,600	-228,000
Households	1,704,600	1,532,600	-172,000
Persons per Household	2.81	3.03	0.21
Residential Vacancy Rates	5.6%	2.9%	-2.7%

¹ Based on extension of policy beyond 2020.

End

SIMULATION: RESTRICTION ON NON RESIDENTIAL CONSTRUCTION

Table C-2
Restriction on Non-Residential Construction

Policy: Restrict new construction of commercial, industrial, retail, and other employment buildings by imposing annual limits on square footage permitted. In practice, this policy may exempt specific structures needed to provide essential services, or target only specific types of employment space. In this simulation, all non-residential buildings are subject to the annual limit.

This policy intends to slow the growth in non-agricultural wage and salary employment, requiring less migration than the baseline forecast. The simulation forecasts the relationship between employment space, employment, and population, and attempts to quantify some of the impacts of this policy.

Because the target 2020 population requires population growth between 2000 and 2020 to be 40 percent slower than the baseline forecast, this policy limits annual non-residential square footage to 40 percent below the baseline level shown below. A more detailed discussion of this simulation is provided in Section II.

Baseline Demand for Non-Residential Square Footage¹		
	2000	2020 Baseline
Wage & Salary Jobs	1,170,989	1,485,353
Agricultural W&S Jobs	11,646	11,474
Non-Ag W&S Jobs	1,159,343	1,473,879
Total Sq. Footage ²	374,371,015	475,939,888
Vacancy Rate ³	5.0%	5.0%
Vacant Sq. Footage	18,830,483	23,939,295
Occupied Sq. Footage	355,540,532	452,000,593
Employees Per Sq. Ft. ⁴	0.0033	0.0033
Employees Per 1000 Sq. Ft.	3.3	3.3
Additional Sq. Ft. '00-'20 ⁵		101,568,873
Annual Sq. Ft. '00-'20		5,078,444

¹ Using baseline employment forecast and current (2000) employment density and vacancy rate.

² Estimated for Fall 2000 by combining data from MetroScan (tax assessor data) for buildings with less than 100,000 square feet and John Burnham Co. for buildings with 100,000 or more square feet. This includes all non-residential structures except some large hotels, hospitals, and government buildings not included in Burnham database. Demand for square footage in 2020 computed from 2020 non-agricultural wage and salary job forecast and current (2000) vacancy rate and employees per square foot.

³ Weighted average of office, retail, and industrial vacancy rates from CB Richard Ellis, San Diego Market Reports, Q4 2000.

⁴ Non-agricultural wage and salary jobs divided by occupied square feet.

⁵ Total square footage in 2020 minus total square footage in 2000.

continued...

Table C-2
Restriction on Non-Residential Construction

Employment Densities for Selected Building Types			
Building Type	Employees per 1000 sq. ft.		Average³
	Low¹	High²	
Industrial/R&D Park	1.4	4.7	3.4
Office High Rise	4.3	5.0	4.6
Office Low Rise	3.8	5.4	4.8
Single Company Office Bldg.	2.3	3.7	2.7
Medical Office Bldg.	3.7	4.5	4.2
Community Shopping Center	1.4	2.1	1.7
Neighborhood Shopping Center	1.8	3.1	2.8
Hotel (non-resort)	0.6	1.4	1.1
<i>Unweighted Average, all types</i>	2.4	3.7	3.2
<i>Difference from overall average</i>	-35.5%	18.2%	

¹ The lowest observed value from survey for each building type.

² The highest observed value from survey for each building type.

³ The average observed value from survey for each building type.

Source: SANDAG, *San Diego Traffic Generators*, 1990. Cited in SANDAG, *2020 Cities/County Forecast Technical Documentation, Volume III*, December 1998.

Annual Non-Residential Construction Policy		
	Baseline	Policy¹
Annual Sq. Ft. '00-'20	5,078,444	3,047,066
Additional Sq. Ft. '00-'20	101,568,873	60,941,320
Sq. Ft. "in pipeline" ²	24,522,550	24,522,550
<i>Under Construction</i>	6,777,489	6,777,489
<i>Planned</i>	3,922,298	3,922,298
<i>Proposed</i>	13,822,793	13,822,763
Total Sq. Ft. 2020 ³	475,939,888	435,312,335

¹ Annual square footage is 40 percent below the baseline level.

² As of Fall 2000, about 24.5 million square feet of non-residential space was under construction, planned, or proposed. This space is included in the additional square feet under the baseline, and is "grandfathered" under the policy.

³ Total square footage in 2000 plus additional square footage, 2000 to 2020.

continued...

Table C-2
Restriction on Non-Residential Construction

Vacancy Rate Adjustment	
Minimum Vacancy Rate ¹	Policy 3.00%
Adjusted Vacancy Rate	3.00%
Vacant Sq. Ft. 2020	13,059,370
Occupied Sq. Ft. 2020	422,252,965

¹ Assumption based on historical vacancy rates and observations from other metropolitan areas. In markets where vacancy rates fall below three percent, lease rates may soar, causing some dislocation that drives vacancy rates back to three percent or higher. Also, in this simulation, the vacancy rate refers to physically vacant space, not necessarily available space.

Employment Density Adjustment ¹			
	Baseline	Policy	Limit ²
Density Adjustment		7.0%	18.2%
Occupied Sq. Ft. 2020	452,000,593	422,252,965	
Employees per Sq. Foot	0.0033	0.0035	
Non-Ag W&S Jobs 2020	1,473,879	1,473,879	
Increase from 2000	314,536	314,536	

¹ Under a policy to restrict new non-residential square footage by 40 percent, a 6.9 percent increase in employment density (from 3.3 workers per 1000 square feet to 3.5) combined with a decrease in the non-residential vacancy rate from 5.2 percent to 3.1 percent could accommodate all of the baseline forecast employment growth.

Even if no space were allowed except for what is already in the pipeline, all forecast employment growth could be accommodated with a 16.6 percent increase (to 3.8 workers per 1000 square feet) in employment density.

² In this simulation, average employment density is not allowed to increase by more than 18.2 percent. This parameter reflects the difference between average and highest observations for each building type from surveys used to develop the San Diego Traffic Generators publication. An increase of 18.2 percent would assume that all buildings are occupied at the highest density within their observed range.

continued...

Table C-2
Restriction on Non-Residential Construction

2020 Population and Labor Force Data		
	Baseline	Policy
Total Non-Ag Employment	1,473,879	1,473,879
Total Farm Employment ¹	11,474	11,474
Self-Employed ¹	142,408	142,408
Residence Adjustment ¹	105,344	105,344
Civilian Employment	1,733,105	1,733,105
Baseline Unemployment Rate ¹	5.8%	5.8%
Civilian Labor Force Demand ²	1,839,378	1,839,378
Natural Labor Force ³	1,676,644	1,676,644
Adj. Unemployment Rate ⁴	5.8%	5.8%
Unemployment Rate ⁵	5.8%	5.8%
Civilian Labor Force ⁶	1,839,378	1,839,378
Military	93,890	93,890
Total Labor Force	1,933,268	1,933,268
Population to LF Ratio	1.99	1.99
Population	3,853,297	3,853,297
Difference from baseline		0

¹ Farm employment, self-employment, and the residence adjustment are not directly impacted by the limit on non-residential development, so they are held constant at the baseline level. In fact, there may be opportunity for these sectors to exceed their baseline levels if growth in non-agricultural wage and salary employment were reduced.

² Assuming baseline unemployment rate.

³ With no net migration, the civilian labor force is expected to grow by 247,000 between 2000 and 2020.

⁴ If demand for labor remains higher than the natural labor force, the unemployment rate remains at the baseline level. Otherwise, the unemployment rate may rise in the short run.

⁵ If the adjusted unemployment rate exceed 7.7 percent, outmigration is expected to occur as an additional adjustment, bringing the unemployment rate back to 7.7 percent with a smaller labor force than initially forecast.

⁶ In the long run, if the unemployment rate were to remain near its 1993 high of 7.7 percent, net migration would be negative, and there would be downward pressure on wages. The labor force would be smaller than the expected natural labor force.

continued...

Table C-2
Restriction on Non-Residential Construction

2020 Population and Housing Data		
	Baseline	Policy
Population	3,853,297	3,853,297
Household Population	3,727,763	3,727,763
Housing Stock	1,404,231	1,404,231
Households	1,325,652	1,325,652
Household Size	2.81	2.81
Residential Vacancy Rates	5.6%	5.6%

Average Home Price in 2000 dollars		
Housing Price Elasticity ¹ =	2.6681	
	DEFM Baseline	Policy
2000 Housing Units	1,057,480	1,057,480
2020 Housing Units	1,404,231	1,404,231
Numeric Difference		0
Percent Difference		0.0%
2000 average price (\$2000)	\$318,878	\$318,878
2020 average price (\$2000)	\$371,084	\$371,084
Numeric Difference		\$0
Percent Difference		0.0%

¹ Percent change in real housing prices divided by percent shortfall in housing units, based on the number of housing units expected in the San Diego region in 2000 using the region's 1980 household size. The actual number of housing units in 2000 was 6.5 percent lower than the expected number of units. Average housing prices were 17.4 percent higher in 2000 than in 1980, after controlling for inflation.

2050 Extension of Annual Labor Force Growth		
	DEFM Baseline	Policy
Population	4,934,800	4,934,800
Total Labor Force	2,475,877	2,475,877
Civilian Labor Force	2,381,987	2,381,987
Employed Residents	2,243,832	2,243,832

continued...

Table C-2
Restriction on Non-Residential Construction

2020 Summary Information			
	Baseline	Policy	Difference
Population	3,853,300	3,853,300	0
Household Population	3,727,800	3,727,800	0
Housing Stock	1,404,200	1,404,200	0
Households	1,325,700	1,325,700	0
Household Size	2.81	2.81	0.00
Residential Vacancy Rates	5.6%	5.6%	0.0%
Civilian Jobs	1,627,800	1,627,800	0
Employees Per Square Foot	0.0033	0.0035	0.0002
Per Capita Income (\$2000)	\$34,100	\$34,100	\$0
Unemployment Rate	5.8%	5.8%	0.0%
Non-Residential Vac. Rate	5.0%	3.0%	-2.0%
Average Home Price (\$2000)	\$371,100	\$371,100	\$0
Ratio of Home Price to Income ¹	3.87	3.87	0.00

¹ Ratio of average home price to average income per household.

2050 Summary Information¹			
	Baseline	Policy	Difference
Population	4,934,800	4,934,800	0
Household Population	4,793,300	4,793,300	0
Housing Stock	1,805,500	1,805,500	0
Households	1,704,600	1,704,600	0
Household Size	2.81	2.81	0.00
Residential Vacancy Rates	5.6%	5.6%	0.0%

¹ Based on extension of policy beyond 2020.

End

SIMULATION: SHIFTING THE JOB MIX

Table C-3
Shifting the Job Mix

Policy: Encourage a more aggressive focus on high value added industries, resulting in a more balanced industry mix in 2020 through investments and policies that lead to the creation of more high value added jobs than in the baseline forecast. If total industrial output in the region under this policy is the same as in the baseline forecast, shifting output from lower value industries to higher value industries will require less overall employment growth. Total output is assumed constant in order to simulate the impacts of the policy.

Higher value industries are those with an average output per employee above the regional average. Lower value industries are those with an average output per employee below the regional average. The mix of industries in each category changes slightly over time. For the simulation, the shift in output applies to the industry mix in 2020. The input-output model captures the employment multiplier effects of this shift.

Based on public expenditures that encourage the rate of growth in private investment in capital stock to double compared to its expected growth, the share of 2000 to 2020 growth in output that is shifted from lower value industries to higher value industries is five percent. This policy is discussed in Section II.

Baseline Job Mix				
			Numeric	%
<u><i>High Value Added</i></u>	2000	2020	Change	Change
Output/Employee (2000\$)	\$116,568	\$193,304	\$76,736	66%
Total Output (2000\$)	\$44,725,428,692	\$75,499,034,742	\$30,773,606,050	69%
Total Employment	383,686	390,572	6,887	2%
<u><i>Low Value Added</i></u>				
Output/Employee (2000\$)	\$48,186	\$63,655	\$15,469	32%
Total Output (2000\$)	\$37,937,157,299	\$69,688,294,692	\$31,751,137,393	84%
Total Employment	787,304	1,094,781	307,477	39%
<u><i>All Industries</i></u>				
Output/Employee (2000\$)	\$70,592	\$97,746	\$27,154	38%
Total Output (2000\$)	\$82,662,585,991	\$145,187,329,434	\$62,524,743,443	76%
Total Employment	1,170,989	1,485,353	314,364	27%

continued...

Table C-3
Shifting the Job Mix

% Change in 2000-2020 Increase in Output:	5.0%
Value of Output Shifted from Low to High	\$3,126,237,172

Shifted (Policy) Job Mix		
<u>High Value Added</u>	Baseline	Policy
Total Output (2000\$)	\$75,499,034,742	\$78,625,271,914
Total Employment ¹	390,572	406,745
Change 2000-2020	6,887	23,059
% Change 2000-2020	2%	6%
<u>Low Value Added</u>		
Total Output (2000\$)	\$69,688,294,692	\$66,562,057,520
Total Employment ¹	1,094,781	1,045,669
Change 2000-2020	307,477	258,365
% Change 2000-2020	39%	33%
<u>All Industries</u>		
Output/Employee (2000\$)	\$97,746	\$99,963
Total Output (2000\$)	\$145,187,329,434	\$145,187,329,434
		4
Total Employment	1,485,353	1,452,414
Change 2000-2020	314,364	281,424
% Change 2000-2020	27%	24%

¹ The policy does not change average output per employee with industries. For a given level of output, employment can be derived from output divided by average output per employee.

Average Output per Employee in 2000 Dollars			
	Low Value Added	High Value Added	Overall
Baseline 2000	\$48,186	\$116,568	\$70,592
Baseline 2020	\$63,655	\$193,304	\$97,746
Simulation 2020	\$63,655	\$193,304	\$99,963
Difference from Baseline	0.0%	0.0%	2.3%

continued...

Table C-3
Shifting the Job Mix

2020 Population and Labor Force Data		
	Baseline	Policy
Total W & S Employment	1,485,353	1,452,414
Self-Employed ¹	142,408	142,408
Residence Adjustment ¹	105,344	105,344
Civilian Employment	1,733,105	1,700,166
Baseline Unemployment Rate ¹	5.8%	5.8%
Civilian Labor Force Demand ²	1,839,378	1,839,378
Natural Labor Force ³	1,676,644	1,676,644
Adj. Unemployment Rate ⁴	5.8%	5.8%
Unemployment Rate ⁵	5.8%	5.8%
Civilian Labor Force ⁶	1,839,378	1,839,378
Military	93,890	93,890
Total Labor Force	1,933,268	1,933,268
Population to LF Ratio	1.99	1.99
Population	3,853,297	3,783,619

¹ Self-employment and the residence adjustment are not directly impacted by the shifting job mix, so they are held constant at the baseline level. In fact, these sectors may differ from their baseline levels if growth in wage and salary employment were reduced.

² Assuming baseline unemployment rate.

³ With no net migration, the civilian labor force is expected to grow by 247,000 between 2000 and 2020.

⁴ If demand for labor remains higher than the natural labor force, the unemployment rate remains at the baseline level. Otherwise, the unemployment rate may rise in the short run.

⁵ If the adjusted unemployment rate exceed 7.7%, outmigration is expected to occur as an additional adjustment, bringing the unemployment rate back to 7.7% with a smaller labor force than initially forecast.

⁶ In the long run, if the unemployment rate were to remain near its 1993 high of 7.7%, net migration would be negative, and there would be downward pressure on wages. The labor force would be smaller than the expected natural labor force.

2020 Population and Housing Variables		
Population	3,853,297	3,783,619
Group Quarters	125,534	125,534
HH Population	3,727,763	3,658,085
HH Size	2.81	2.81
Households	1,325,652	1,300,873
Housing Stock	1,404,231	1,377,984
Vacancy Rates	5.6%	5.6%
Per Capita Income (2000\$)	\$34,058	\$34,685
Average HH Income (2000\$)	\$95,773	\$97,536

continued...

Table C-3
Shifting the Job Mix

Average Home Price in 2000 Dollars		
Housing Price Elasticity ¹	2.6681	
	Baseline	Policy
2000 Housing Units	1,057,480	1,057,480
2020 Housing Units	1,404,231	1,377,984
Numeric Difference		-26,247
Percent Difference		-1.9%
2000 average price (\$2000)	\$318,878	\$318,878
2020 average price (\$2000) ²	\$371,084	\$352,578
Numeric Difference		-\$18,506
Percent Difference		-5.0%

¹ Percent change in real housing prices divided by percent shortfall in housing units, based on the number of housing units expected in the San Diego region in 2000 using the region's 1980 household size. The actual number of housing units in 2000 was 6.5 percent lower than the expected number of units. Average housing prices were 17.4 percent higher in 2000 than in 1980, after controlling for inflation.

² Average price under the policy is 5.0 percent lower than the baseline, calculated by applying the housing price elasticity to the -1.9 percent difference in housing units under the policy.

2050 Extension of Annual Labor Force Growth		
	Baseline	Policy
Employed Residents	2,243,832	2,211,662
Civilian Labor Force	2,381,987	2,347,836
Total Labor Force	2,475,877	2,441,726
Population	4,934,800	4,866,731

continued...

Table C-3
Shifting the Job Mix

2020 Summary Information			
	Baseline	Policy	Difference
Population	3,853,300	3,783,600	-69,700
Household Population	3,727,800	3,658,100	-69,700
Housing Stock	1,404,200	1,378,000	-26,200
Households	1,325,700	1,300,900	-24,800
Household Size	2.81	2.81	0.00
Residential Vacancy Rates	5.6%	5.6%	0.0%
Civilian Jobs	1,627,800	1,594,800	-33,000
Employees Per Square Foot	0.0033	0.0033	0.0000
Per Capita Income (2000\$)	\$34,100	\$34,700	\$600
Unemployment Rate	5.8%	5.8%	0.0%
Non-Residential Vac. Rate	5.2%	5.2%	0.0%
Average Home Price (2000\$)	\$371,100	\$352,600	-\$18,500
Ratio of Home Price to Income ¹	3.87	3.61	-0.26

¹ Ratio of Average Home Price to Average Income per Household.

2050 Summary Information¹			
	Baseline	Policy	Difference
Population	4,934,800	4,866,700	-4,934,800
Household Population	4,793,300	4,725,200	-4,793,300
Housing Stock	1,805,600	1,780,000	-1,805,600
Households	1,704,600	1,680,400	-1,704,600
Household Size	2.81	2.81	-2.81
Residential Vacancy Rates	5.6%	5.6%	-5.6%

¹ Based on extension of policy beyond 2020.

End

APPENDIX D:
REPORTS FROM EXPERT PANEL

Appendix D

REPORTS FROM EXPERT PANEL

The following section includes reports from the study's panel of nationally known experts. The panel included John Landis, University of California, Berkeley; Stephen Levy, Center for the Changing Study of the California Economy; and Donald Meyer, University of Southern California. Short biographies for the panelists are included below. The reports were instructed to present their opinions and perspectives on several topics, including:

- How the study adequately addressed the questions posed in the executive summary and introduction?
- Was the evidence appropriate, given the questions we were asked to address?
- Was the study's conclusions appropriate, given the analysis?
- What about the concept of a carrying capacity for the San Diego region?
- Did the study provide any new insight on the topic of controlling population growth within the region? If so, what?
- In general, can regional control or limit growth? If so, how?

BIOGRAPHIES

John Landis, PhD (City and Regional Planning, Berkeley) is Professor of City and Regional Planning at the University of California, Berkeley, where he teaches courses in planning history, housing, proper development, land use planning, and computer mapping. Prof. Landis has published more than two dozen book chapters and articles in such journals as *Annals*, *Urban Studies*, *Environment and Planning*, and *Housing*. Berkeley. His article, "Imagining Land Use Futures," won the 1995 award from the Journal of the American Planning Association. Prof. Landis has been involved in a wide range of planning issues, including the economic development, urban sprawl, and earthquake recovery. Together with several generations of graduate students, Landis designed and developed the California Urban Futures study of urban simulation models.

Stephen Levy, Ph.D. is Director and Senior Economist of the Center for Changing Study of the California Economy (CCSE) in Palo Alto. CCSE is a private research organization founded in 1988 to provide an independent assessment of economic and demographic trends in California. CCSE works with private companies and public

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- Has the study adequately addressed the questions posed in the executive summary and introduction?
- Was the analysis appropriate, given the questions we were asked to address?
- Were the study's conclusions appropriate, given the analysis?
- What about the concept of a carrying capacity for the San Diego region?
- Did the study provide any new insight on the topic of controlling population growth within the region? If so, what?
- In general, can a region control or limit growth? If so, how?

BIOGRAPHIES

John Landis, Ph.D. (City and Regional Planning, Berkeley) is Professor of City and Regional Planning at the University of California, Berkeley, where he teaches courses in planning history, housing, project development, land use planning, and computer mapping. Prof. Landis has published more than two dozen book chapters and articles in such journals as *Access*, *Urban Studies*, *Environment and Planning*, and *Mortgage Banking*. His article, "Imagining Land Use Futures," won the 1995 award for best feature article in the *Journal of the American Planning Association*. Prof. Landis' recent research has focused on a wide variety of housing and growth policy issues, including affordable housing, the environmental impacts of urban growth, the extent and causes of urban sprawl, and earthquake recovery. Together with several generations of graduate students, Landis designed and developed the California Urban Futures family of urban simulation models.

Stephen Levy, Ph.D. is Director and Senior Economist of the Center for Continuing Study of the California Economy (CCSCE) in Palo Alto. CCSCE is a private research organization founded in 1969 to provide an independent assessment of economic and demographic trends in California. CCSCE works with private companies and public

institutions that require an explanation and analysis of the growth process as well as detailed projections. Stephen Levy is the principal author of CCSCE's annual report series on the California's economy. CCSCE annual reports have acquired a national reputation for credible and independent analyses. CCSCE provides long term economic and demographic projections on an ongoing basis to institutions such as the Southern California Association of Governments (SCAG), Metropolitan Water District of Southern California, Southern California Edison, and The Irvine Company. Mr. Levy is Vice Chairman of the Council of Economic Advisors for the California Institute for Public Policy in Washington, D.C. and an advisor to the California Economic Strategy Panel. Stephen Levy has degrees in economics from MIT and Stanford University.

Dowell Myers, Ph.D. (Urban Planning, Massachusetts Institute of Technology), is Professor and Director of the Master of Planning program at USC. He is a specialist in urban growth and development with expertise as a planner and urban demographer. An advisor to the Bureau of the Census, he has authored the most widely referenced work on census analysis, *Analysis with Local Census Data: Portraits of Change* (Academic Press, 1992). His program of research has pursued two contributions to the planning field: (1) bringing people back in as the focus of planning success; and (2) understanding planning as a temporal process of developing the future. Recent research projects have focused on the upward mobility of immigrants to Southern California and the many changes they create in the city, as well as on projections of the future impacts of the growing California population. A fellow of the Lincoln Institute for Land Policy and a member of several advisory boards, Dr. Myers has published recent articles in the *Journal of the American Planning Association*, *Demography*, *American Sociological Review*, and *Journal of Housing Research*.

Appendix E

COMMENTS FROM CITIZEN REVIEW COMMITTEE

The following provides an overview of the general scope of comments expressed during the consultation with the Citizen Review Panel and staff's responses to them. The comments are not intended to represent the consensus of the steering. Positive feedback for the discussion was expressed, although a few comments have not been included. In addition, written comments received by email have been included.

THE STUDY'S METHODOLOGY

- The study should not show an increase in housing prices without a change in income. In addition, employment density increases without any change in income or population are unusual.

Response: In our simulations, we show both an increase in income and in housing prices between 2001 and 2020. However, in simulations where that housing tax increase is removed, the increase in housing prices is smaller, but still positive, indicating housing affordability. It is not unreasonable to experience increasing house prices in the region without equal increases in income. This has occurred here and around in other regions.

With regard to employment density, we do show an increase in population and income from 2001 to 2020 under the baseline and growth slowing policy simulations. Under the economy recession, population is the same as in the baseline because all employment and housing growth is unconstrained. Income increases over the 20-year period, but does not change from the baseline because the economy grows at the same rate under the simulation as in the baseline.

Small but significant gains of 0.1% in income from the baseline, but not in housing prices.

APPENDIX E: COMMENTS FROM CITIZEN REVIEW COMMITTEE

Appendix E

COMMENTS FROM CITIZEN REVIEW COMMITTEE

The following provides an overview of the general areas of concern expressed during staff's meeting with the Citizen Review Panel and staff's response to them. The comments are not intended to represent the consensus of the meeting. Positive feedback for the document was expressed, although those comments have not been included. In addition, written comments received by staff have been attached.

THE STUDY'S METHODOLOGY

- The study should not show an increase in housing prices without a change in income. In addition, employment density increases without any changes in income or population are unusual.

Response: In our simulations, we show both an increase in income and in housing prices between 2000 and 2020. However, in simulations which limit housing the increase in housing price exceeds the increase in income, worsening housing affordability. It is not unreasonable to experience increasing home prices in the region without equal increases in income. This has occurred here and as well as in other regions.

With regard to employment density, we do show an increase in population and income from 2000 to 2020 under the baseline and growth slowing policy simulation. Under the economic restriction, population is the same as in the baseline because all employment and housing growth is accommodated. Income increases over the 20-year period, but does not change from the baseline forecast because the economy grows at the same rate under the simulation as in the baseline forecast.

Recall that the 2020 summary information tables compare two alternative paths of development. The tables do not represent a direct gain or loss from the baseline, but rather a different outcome that has developed over time.

- The economic and demographic model used in this study is inadequate for the purpose of addressing the issues raised. In particular, the model lacks behavioral parameters that link housing prices, commercial/industrial rents, income and area amenities. A housing demand equation should also include a housing price factor.

Response: For most of the simulations we do not use our forecast model. The simulation results are derived primarily from a series of relationships developed from empirical evidence and research. The equations and assumptions used in the simulations are included in Appendix C of this study.

SANDAG's Demographic and Economic Forecast Model (DEFM) incorporates home prices and wage variables through the consumer price index (CPI) and a regional competitive index. The CPI speaks to the region's relative affordability and cost of living compared to other areas. The regional competitive index is computed to represent the relative costs of doing business in the San Diego region. Rents and amenities are not explicitly specified in the DEFM equations, but are accounted for in the historical data used to calibrate the econometric relationships. Higher prices in the region slow employment growth, reducing the demand for domestic migration. This results in slower population growth and housing demand.

- The study should include an explanation of the models and procedures used, their limitations, and the assumptions made.

Response: For most of the impact simulations we do not use SANDAG's Demographic and Economic Forecast Model (DEFM). The simulation results are derived primarily from a series of relationships developed from empirical evidence and research. The equations and assumptions (including employment density, household size, and housing price) used in the simulations are included in Appendix C of this study. We include information about the assumptions used in DEFM in Appendix A. Additional information about the accuracy of SANDAG's models has also been added to Appendix F.

HOUSING

- There was no housing shortfall (or shortage) between 1980 to 2000. Results based on the assumption that between 1980 to 2000 there was a shortage of housing are misguided.

Response: We believe that there is a sufficient amount of evidence to prove a housing shortage at both the regional and state level. A recent study for the California Department of Housing and Community Development concludes that California "chronically under-produces housing, especially in coastal markets."

In the San Diego region, low vacancy rates and price increases over this time period indicate a relative shortage of housing supply compared to demand. Also, the ratio of job and population growth to housing unit growth has increased, as relatively fewer housing units are built for each job created. Rapid levels of residential growth in Baja California and Southwestern Riverside County also support the concept of a shortage of housing in the San Diego region. Lastly, the current state fiscal system discourages the local jurisdictions from designating land for housing.

- There are existing housing limitations, even though there is no regional housing limitation policy. For example, restrictions on the future urbanizing area, NIMBYism reducing density, and environmental preservation areas all act as limits to housing. In addition, we already have overcrowded households and people living in substandard housing within our region.

Response: We agree with these statements. A similar discussion is presented in Section III of this study, under "Descriptions of Growth Slowing Policies."

- The study should increase the discussion of housing affordability under the various policies. The report should say more clearly that if the region chooses to restrict growth, it will fail and will radically increase what is already an enormous housing crisis.

Response: We have clarified the presentation of findings in the study and emphasize the magnitude of potential impacts in Section II.

THE ENVIRONMENT

- The study needs more of a biological and ecological emphasis. At some point, population growth will outstrip the ability of the region to work as a functioning ecological system. The study should also include a discussion of water, sewer, landfill, and other biological limitations to growth.

Response: We recognize that these are important issues, but they are not part of the focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of SANDAG's Board, the next step may be to address these and other related issues.

- The region should use a carrying capacity as a guide to drive policy, even if we cannot enforce it. Let's not try to enforce it, let it be our guide and target.

Response: The study is intended to evaluate the ability of local public policy to slow growth and concludes that even if the region were to set a carrying capacity, it could not be enforced. However, the study does not evaluate the merit of the carrying capacity concept, or attempt to set one. The

conclusions of this study do not prevent the region from continuing the discussion of carrying capacity.

- **The economy is a subset of the ecology. If the ecology continues to degrade, it is “anti-business” and will hurt the economy.**

Response: The economy depends in part on the health of the environment. That is why our Regional Economic Prosperity Strategy is only one component of the Regional Growth Management Strategy. The Regional Economic Prosperity Strategy states that the natural environment is essential to the region’s quality of life and is an important element in business retention strategies. The Growth Management Strategy includes elements designed to preserve and protect open space, improve air and water quality, and manage solid waste.

THE ECONOMY AND EMPLOYMENT

- **The study’s assumption that we could accommodate the same number of jobs with a 40 percent reduction in employment space does not pass a “reasonableness” test.**

Response: The employment space currently existing, under construction, or planned in the region can accommodate more jobs at higher densities. Based on the range of observed densities for each building type, we determined that employment densities could increase as much as 18 percent. In our simulation, employment density increases only seven percent.

The simulation only restricts 40 percent of projected growth in employment space, and still allows 60 percent to be developed. Employment density increases occur in both existing and future space. In our forecast, non-agricultural wage and salary job growth slows and increases only 27 percent over the 2000 base (compared to 78 percent growth between 1980 and 2000).

- **The study should include discussion of policies that help to improve the region’s existing labor force and local access to capital.**

Response: The Regional Economic Prosperity Strategy includes a series of recommended actions designed to improve the regional labor force and increase access to capital.

- **The San Diego region has relatively low business taxes compared to other areas. The study should address raising business taxes to pay for the infrastructure needed to maintain the region’s quality of life. The study should include a comparison of the level of taxation in the region compared to other areas in California. If you want to discourage growth, raise taxes.**

Response: It is possible that raising taxes will slow population growth by some amount. However, it is unclear how much growth will be slowed, and

there is a limit on the amount of additional taxation the region will accept. Raising taxes generates additional revenue for local government. If this revenue is used to improve the competitiveness of the region, or to improve quality of life, the growth slowing effects of raising taxes will be offset. Section II contains additional information on taxation.

- **If the region were to limit jobs, the high value added jobs would be the most likely to leave the region.**

Response: This issue is fairly complex, and it is possible that both high and low value added jobs would be affected by policies designed to restrict the economy. Under any policy designed to restrict business expansion or employment growth, employers will have to decide whether the benefits of relocating exceed the costs of remaining or expanding in the region. This type of discussion is included throughout Section II in the study.

- **The study needs to discuss business license restrictions.**

Response: The study addresses policies that limit the capacity of the economy to accommodate growth. The example used in the study is a restriction on employment space. A business license restriction is similar to a restriction on employment space, in that both policies attempt to slow employment growth in the region. The local economy is able to adjust to and circumvent either policy, rendering them both ineffective.

OTHER REVISIONS AND AREAS OF EMPHASIS

- **The discussion of family planning and reducing fertility should be a primary part of this study. There is no discussion of policies that reduce pregnancies and increase access to contraception. The study should include an analysis of public health policies designed to reduce population growth alongside the other policy simulations. The study should say, at the least, that these policies would have an effect if implemented at the national level. Local government can be a strong voice in terms of advocating for a national family planning policy.**

Response: We have added discussion of family planning to Section II of the study. We conclude that a policy directed at family planning programs with the intent of slowing future population growth in the region may not be effective. First, no public policies exist at any level of government in the U.S. to control the number of children that a family wants to have, and none are ever likely to be enacted. Current fertility rates are already very low in the U.S. and in the San Diego region, corresponding to a family size of about two children per couple. Our forecasts of these rates are stable or declining for every ethnic group. Finally, the ability to reduce births through family planning programs is limited to reducing unwanted births. Unwanted births have fallen to only ten percent of total births, including births that occur sooner than planned.

- The study should elaborate on issues of social inequity and polarization. The study should elaborate on what the impacts of increasing household size mean. For example, the impact of increasing household size on school funding is important. Schools get their funding on a per housing unit basis. Fewer units under a policy while still accommodating the same number of students means less money per student for local schools.

Response: We have expanded the discussion in Section II of the report to better address this issue.

- The study should also include simulations of “draconian” policies, to determine how severe a policy must be to slow growth. The study should illustrate how bad a policy would have to “hurt” in order to be effective.

Response: SANDAG’s previous studies on growth slowing policies did this. By enacting the most severe restrictions these studies showed that it was possible to slow population growth. However, these policies were dismissed due to their negative impacts and difficulty of implementation. This study explores more realistic policies that could be adopted, and evaluates their growth-slowing potential. This approach was supported by our panel of experts.

If slowing growth is the goal, simulating policies that have no chance of being implemented is counter-productive.

- The study should include impact simulations of different combinations of policies.

Response: In the course of our research, we evaluated combinations of growth slowing policies. Because the policies are ineffective individually, they are also ineffective when used together. Moreover, for every additional policy the difficulty of implementation increases. In general, the problems that each policy has individually do not go away when used in a combination. For example, restrictions on employment space, which have no impact on their own, also have no impact in combinations. Housing limitations are still ineffective, and it is still unclear whether a policy that changes the region’s job mix will slow population growth.

- The study should talk about the costs of growth. It should also include quality of life indicators.

Response: We recognize that these are important issues, but they are not part of the focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of SANDAG’s Board, the next step may be to address these and other related issues.

- There is no discussion of quality of life, how this study compares to previous studies, or the impact of illegal immigration in the region.

Response: We have added a discussion of previous studies in Section III. The population impacts of undocumented migrants are included in the overall population forecast. Quality of life is a complex issue that is better addressed in a growth management strategy or as the focus of future research.

- Some of the language in the study is too judgmental. For example, difficulty of implementation does not mean a policy should be discounted. Other policies that SANDAG is trying to implement are also difficult.

Response: We agree that some of the statements were unsubstantiated, so we either removed them or included evidence to support the statement. Our conclusions are based on our research of current literature and the findings from our simulations.

The study does not discount any policies simply because of limitations to implementation. Presenting the difficulty of implementation is meant to illustrate some of the challenges the region would face if it were to endorse a growth slowing policy.

COMMENTS FROM DENNIS MOSER, MOSER VENTURES INC.

The majority of the comments in this letter were requests for clarification or additional explanation of statements made in the study. In general, Mr. Moser feels the study was "very well considered and written." The following comments, however, do require a response from staff.

Comment 2: This comment addresses the statement, "no region has ever successfully stopped or slowed population growth." While it seems intuitively correct, some may argue that Portland has slowed growth with its Urban Growth Boundary.

Response: An urban growth boundary does not slow population growth, it simply moves growth around. An urban growth boundary is a line drawn around a jurisdiction to define where urban-scale development can and cannot occur. Portland's growth boundary is designed to reduce the negative impacts of growth by allocating development and protecting open space. It is not designed to slow population growth, and encourages higher densities and the provision of affordable housing units.

In the "greater" Portland region (including the surrounding communities that house much of Portland's labor force) population growth has not slowed. Portland's neighbor, Clark County, Washington, has experienced rapid growth similar to Southwestern Riverside County in our region. For more information on Portland and urban growth boundaries, refer to Section III of the study.

Comment 6: That growth in low value added industries is forecast to exceed growth in high value added industries seems counter-intuitive. It would seem that the region's high value added industries are growing more rapidly.

Response: Because high value added industries require fewer employees to respond to an increase in demand, employment growth in these industries is often below that of low value added industries. High value added industries are those industries that are highly productive and show greater levels of output per employee compared to the regional average.

It is true that the San Diego region's high value added industries have been growing at a rapid pace over the last few years. However, over the last decade growth in low value added industries has outpaced growth in high value added industries.

Comments 12 and 13: How come high value employment decreases as a share of total regional employment between 2000 and 2020?

Response: Demand for both high and low value added products and services is expected to increase over the next twenty years, and both types of industry will grow. However, employment growth in high value added industries between 2000 and 2020 is outpaced by growth in low value added industries. This occurs because high value added industries require relatively fewer employees to produce a good or service, and because high value added industries are expected to become even more productive than they are today.

Comment 14: It is unclear why certain policies were chosen to simulate while others were not.

Response: We have distilled local public policies designed to slow population growth into three categories, limits on housing, limits on the economy, or policies that target public expenditures. Essentially, all policies available to local government attempt to reduce population through one of these three "levers." The simulations presented in this study represent the most direct, and potentially effective, policy for each of the three categories.

For example, a simulation of a residential development impact fee policy is equivalent to a policy simulation that restricts the annual number of residential permits. Impact fees increase the cost of development, indirectly reducing the number of new housing units. Because the effect is indirect, the development impact fee policy will be even less effective at slowing growth than an explicit restriction on units.

Comment 16: The study concludes that growth policies are ineffective while also stating that it is possible to design an economic strategy consistent with the goal of slowing growth. These statements appear mutually exclusive, please explain.

Response: These statements are not mutually exclusive. It is possible to design a strategy consistent with the goal of slowing growth, but it is unlikely that such a policy will be effective at slowing population growth. Our simulation showed that this policy has the potential to slow growth eight percent below the baseline. However, it will be difficult to refocus our investments and exclude low value added industries from benefiting. Also, the local labor force may not be able to meet the labor demands that would occur under this approach.

COMMENTS FROM RICHARD CARSON, UCSD DEPARTMENT OF ECONOMICS:

Paragraph 2: The study addresses the wrong questions. Citizens in the region are not concerned with population growth *per se*, but quality of life.

Response: We agree that quality of life is an important issue. However, many people in the region do care about population growth, and the SANDAG Board determined that the primary focus of this study was to answer several questions related to the region's forecast growth.

Paragraphs 3: Findings in the study seem preordained, and the study makes unsubstantiated claims. For example, the conclusion of the study claims that "policies designed to slow growth are likely to meet with resistance because the estimated negative impacts and unknown consequences far outweigh the estimated positive impacts."

Response: This claim is based on our research of current literature and the findings from our simulations. For example, slowing population growth by eleven percent by limiting housing units would entail greater levels of commuting into the region, worsen housing affordability, and encourage overcrowding in existing units. We agree that some of the statements were unsubstantiated, so we either removed them or included evidence to support the statement.

Paragraph 4: Results based on the assumption that between 1980 to 2000 there was a shortage of housing are misguided, as there was no San Diego regionwide prohibition on housing starts over this time period.

Response: We believe that there is a sufficient amount of evidence to prove a housing shortage at both the regional and state level. A recent study for the California Department of Housing and Community Development concludes that California "chronically under-produces housing, especially in coastal markets." In the region, low vacancy rates and housing price increases over this time period indicate a relative shortage of housing supply compared to demand. Also, the ratio of job and population growth to housing unit growth has increased, as relatively fewer housing units are built for each job created. Rapid levels of residential growth in Baja California and Southwestern Riverside County also support the concept of

a shortage of housing in the San Diego region. Lastly, the state fiscal system discourages local jurisdictions from designating land for housing.

Paragraph 5 and 6: The economic and demographic model used in this study is inadequate for the purpose of addressing the issues raised. In particular, the model lacks behavioral parameters that link housing prices, commercial/industrial rents, income and area amenities. It also lacks the perspective that regions compete for the marginal migrant on three dimensions: wage structure, housing costs, and amenity levels. Manifestation of these problems can be seen in the results of the simulations.

Response: For most of the simulations we do not use our forecast model. The simulation results are derived primarily from a series of relationships developed from empirical evidence and research. The equations used in the simulations are included in Appendix C of this study.

SANDAG's Demographic and Economic Forecast Model (DEFM) incorporates home prices and wage variables through the consumer price index (CPI) and a regional competitive index. The CPI speaks to the region's relative affordability and cost of living compared to other areas. The regional competitive index is computed to represent the relative costs of doing business in the San Diego region. Rents and amenities are not explicitly specified in the DEFM equations, but are accounted for in the historical data used to calibrate the econometric relationships. Higher prices in the region slow employment growth, reducing the demand for domestic migration. This results in slower population growth and housing demand.

The model also incorporates increasing productivity, which we feel is a fourth dimension of regional competitiveness. Firms value the productivity level of a region.

Paragraphs 7 and 8: The study contains two misleading concepts. First, the increase in population growth is due largely to the natural increase in the region's population. Many people born in the San Diego region are moving away from here. Second, that increased housing costs, of necessity, disadvantage the poor to a greater extent than other income categories.

Response: The study does not claim for whom the additional housing units will be built. We do not differentiate between the children of current residents and the children of future residents who settle here sometime during the forecast period. There are large flows of in and out migration every year resulting in some children leaving and some arriving, our forecast focuses on the net effect in the region.

Policies that increase housing costs do disadvantage lower income families to a greater extent because low-income families pay a greater percentage of their total income to housing. In order to reduce the impact on low-income families, any policy that increases the cost of housing would also have to increase subsidies for low-income housing, or increase wages in the region.

Appendix F

PUBLIC COMMENTS AND STAFF RESPONSES

Public comments on the draft version of this report were received by mail, by phone, and in person. A summary of the most frequently heard comments, along with SANDAG's staff responses is provided below. The comments are not arranged from "particularly bad" to "coming the closest" to the intended letters received, and the staff responses to them.

SUMMARY OF MOST FREQUENTLY HEARD COMMENTS WITH STAFF'S RESPONSES

1. The report focuses on the negative impacts of slowing growth, without comparing the positive benefits of population reductions.
 - This is true. There probably are benefits to not growing, but the study's purpose was to determine if there are public policies that can effectively curb or slow growth. The conclusion was that policies that limit housing are ineffective and lead to social inequities. Policies that limit the economy also may be ineffective, are potentially harmful, and historically have lacked public support.
2. SANDAG's Table 3 forecast overestimated growth for the 1990s by 66 percent, therefore, their forecasts, models, and assumptions are faulty.
 - It is true that SANDAG and everyone else, including the California Department of Finance (DOF), private sector consultants, and even the U.S. Census Bureau, all overestimated what the region's population growth would be during the 1990s. Also likely, these same "best estimates" overestimated the amount of self-migration from the region caused by the drought and drought measures in Southern California since the Civil Depression.
 - SANDAG used the best data available at the time (1980-1989) to estimate that self-migration from DOF that we used to forecast the 1990s. It is true that the amount of a new family we knew that DOF's 1990s self-migration was very high.
 - Although Table 3 overestimated the amount of self-migration, it was only by 66 percent. DOF's 1990s forecast of 360,000 actually the lowest for 1990s. It was 400,000 that DOF allowed from the 1990s census by just a 6 percent.

APPENDIX F: PUBLIC COMMENTS AND STAFF RESPONSES

Appendix F

PUBLIC COMMENTS AND STAFF RESPONSES

Public comments on the draft version of this report were received by mail, by phone, and in person. A summary of the most frequently heard comments, along with SANDAG staff responses is provided below. The comments are not arranged in any particular order. Following the summary are the comment letters received, and the staff responses to them.

SUMMARY OF MOST FREQUENTLY HEARD COMMENTS WITH STAFF'S RESPONSES

1. **The report focuses on the negative impacts of slowing growth, without comparing the positive benefits of population reduction.**
 - This is true. There probably are benefits to not growing, but the study's purpose was to determine if there are public policies that can effectively stop or slow growth. The conclusion was that policies that limit housing are ineffective and lead to social inequities. Policies that limit the economy also may be ineffective, are potentially harmful, and historically have lacked public support.
2. **SANDAG's Series 8 Forecast overestimated growth for the 1990s by 60 percent, therefore their forecasts, models, and assumptions are faulty.**
 - It is true that SANDAG and everyone else, including the California Department of Finance (DOF), private sector researchers, and even the U.S. Census Bureau, all overestimated what the region's population growth would be during the 1990s. Most likely, these researchers underestimated the amount of out-migration from the region caused by the deepest and longest recession in Southern California since the Great Depression.
 - SANDAG used the best data available at the time (1994): the official state population estimates from DOF that are used to allocate state subvention funds. Today, with the benefit of a new census, we know that DOF's 1994 population estimate for the region was more than 90,000 high.
 - Although Series 8 overestimated the 1990 to 2000 increase in population by 60 percent (500,000 forecasted vs. 300,000 actual), the forecast for total population in the year 2000 differed from the 2000 Census by just 6.8 percent.

- The forecasts have a 30-year track record of accuracy, and prior to Series 8 have always *underestimated* future population. (See Table F-1.)
- 3. DEFM (the regional forecasting model) is obsolete and uses bad data.**
- Not true. DEFM is continually being improved and enhanced. The last major overhaul was done in 1996 just prior to producing the 2020 Forecast. A competitive bidding process resulted in a new model on a new platform, new software, and reconfigured model logic.
 - The “bad data” was, at the time, the very best data available. This is one reason why we do a new forecast every four to five years.
- 4. SANDAG’s estimate of household size is too high.**
- Household size estimates came from DOF. Their over-estimate of population but relatively accurate estimate of the number of housing units led to assumptions of higher household sizes than the 2000 Census revealed.
 - We revised the analysis using the recently released census data, but it did not change the basic conclusions of the study.
- 5. The report gives short shrift to the ability of local family planning efforts to slow growth.**
- The draft report did not mean to imply that local family planning efforts are not important. It said that unwanted pregnancies (which includes both “unwanted at this time” and “unwanted ever”), account for only ten percent of total pregnancies. Therefore, even if local efforts could eliminate all unwanted pregnancies, that would reduce births by less than 10 percent.
 - The 2020 Forecast includes the assumption that total fertility rates in the region are declining and will continue to decline.
- 6. We need to study/quantify the region’s natural carrying capacity.**
- A carrying capacity analysis might help us keep tabs on the region’s environmental health, however public policies cannot enforce a predetermined population cap.
 - SANDAG will soon embark on a major study of regional infrastructure (current deficits, future needs, and financing options) that will include elements related to carrying capacity, such as water supply, water quality, energy, and open space.
- 7. The region should eliminate growth-promoting efforts/policies.**
- Perhaps so. However, it is debatable how much growth they cause. For example, ConVis promotes conventions and tourism, but do large numbers of people actually move here as a result of visiting? The Regional EDC says they no longer recruit out-of-town firms to move here. Rather, they concentrate on job retention and the expansion of businesses already here.

- Some popularly supported projects are growth inducing, such as university expansions and the home porting of aircraft carriers.

8. Continued population growth will destroy our quality of life.

- Only if we let it. That is why growth management is so important. A well conceived, well-implemented plan can control sprawl, protect open space and habitat, and help ensure the region's livability.
- Done right, density increases do not equate to a lower quality of life. Again, it's all about good planning and good design.
- Interesting fact: The City of Carlsbad is about 40 square miles in size and has a population of about 78,000. The City of Paris, France is the same physical size and has a population of 2.2 million, most of whom presumably think highly of their quality of life.

9. Local government can/should do more to limit foreign immigration.

- Immigration is a matter of federal policy. This study was intended to determine if there are local public policies that can effectively stop or slow growth. If the SANDAG Board or individual elected officials wish to advocate changes to federal immigration policy, that is their prerogative.

10. "Don't build it and they won't come."

- The construction of homes does not cause population growth. Builders do not build if no demand exists for their product. In spite of massive out-migration during the recession, population growth still far exceeded housing growth (12.6% vs. 9.9%) during the 1990s. In effect, we didn't build it and they still came.
- This unbalanced growth has resulted in a critical shortage of housing, record-high prices, extremely low vacancy rates, and increasing household sizes in lower income areas.
- If the region is serious about reducing population growth, then we need to reduce job growth. Allowing job growth, but not providing homes for the workers makes no sense.

Table F-1
Comparison of SANDAG's Regionwide Forecasts to Observed Population¹

Forecast Name	Base Year	Forecast Year	Years from Base	Forecasted Population	Observed Population	Difference Num.	Difference Pct.
(No Name)	1971	1980	9	1,750,000	1,873,299	-123,299	-6.6%
Series 2A	1972	1980	8	1,799,900	1,873,299	-73,399	-3.9%
Series 4	1975	1980	5	1,764,300	1,873,299	-108,999	-5.8%
Series 5	1978	1980	2	1,843,700	1,873,299	-29,599	-1.6%
(No Name)	1971	1985	14	2,020,000	2,109,342	-89,342	-4.2%
Series 2A	1972	1985	13	1,999,900	2,109,342	-109,442	-5.2%
Series 4	1975	1985	10	1,993,900	2,109,342	-115,442	-5.5%
Series 5	1978	1985	7	2,082,900	2,109,342	-26,442	-1.3%
Series 6	1980	1985	5	2,088,734	2,109,342	-20,608	-1.0%
(No Name)	1971	1990	19	2,290,000	2,520,499	-230,499	-9.1%
Series 2A	1972	1990	18	2,238,700	2,520,499	-281,799	-11.2%
Series 4	1975	1990	15	2,216,400	2,520,499	-304,099	-12.1%
Series 5	1978	1990	12	2,287,300	2,520,499	-233,199	-9.3%
Series 6	1980	1990	10	2,335,046	2,520,499	-185,453	-7.4%
Series 7	1986	1990	4	2,375,194	2,520,499	-145,305	-5.8%
Series 2A	1972	1995	23	2,471,700	2,657,800	-186,100	-7.0%
Series 5	1978	1995	17	2,473,500	2,657,800	-184,300	-6.9%
Series 6	1980	1995	15	2,526,900	2,657,800	-130,900	-4.9%
Series 7	1986	1995	9	2,585,134	2,657,800	-72,666	-2.7%
Series 2A	1972	2000	28	2,723,000	2,813,833	-90,833	-3.2%
Series 5	1978	2000	22	2,647,200	2,813,833	-166,633	-5.9%
Series 6	1980	2000	20	2,699,200	2,813,833	-114,633	-4.1%
Series 7	1986	2000	14	2,784,195	2,813,833	-29,638	-1.1%
Series 8	1990	2000	10	3,004,434	2,813,833	190,601	6.8%

¹ Sources for observed population:
1985, 1995: California Department of Finance
1980, 1990: July 1 estimate based on April 1 U.S. Census
2000: April 1 U.S. Census



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People and Nature: Our Future Is in the Balance

Western Natural Resource Center

April 5, 2001

Mr. Paul Kavanaugh
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

Dear Mr. Kavanaugh:

The National Wildlife Federation thanks you for the opportunity to participate on the citizen review panel for SANDAG's Growth Policies Study held on March 28th.

While we feel that most our concerns have been captured in the meeting notes distributed on 2 April, we thought it would be helpful to provide you with some written comments that clarify our concerns about the current discussion draft provided to the review panel.

Foremost, we would like to point out that, in our opinion, there are seemingly two fatal flaws to the questions that the study tries to answer.

The first problem we have identified with the report's initial parameters is that the study focuses on answering the question of what might the impacts be if we tried to stop or slow growth in San Diego. Unfortunately, upon further review of the discussion draft, it is our distinct impression that the study concentrated on identifying only the negative economic impacts of stopping or slowing growth. For this study to have unbiased merit (for which SANDAG should be striving), it must also discuss the positive impacts of stopping or slowing growth. Perhaps this can be achieved by asking an additional question: what might the impacts be if we do not attempt to stop or slow growth? By failing to even pose this question and include analysis of societal and environmental impacts in addition to economic impacts, one could surmise that SANDAG has either preordained its conclusion that growth cannot be stopped or slowed, or that SANDAG wishes to advance a pro-growth agenda without analyzing the fiscal, societal, environmental and other costs. We suspect that neither scenario is the case, and hope that as the study is rewritten, this concern is addressed.

Secondly, the question of whether or not a carrying capacity for the region should be established and enforced through public policies is misguided and is poorly addressed in the study.

Carrying capacity is about sustainability. A carrying capacity analysis establishes the amount of human activity an ecosystem and community can handle under several scenarios without compromising the health and function of the ecosystem. A carrying capacity analysis has the advantage of considering the cumulative and indirect environmental impacts, and growth-inducing impacts because it requires development effects to be assessed based on jurisdiction-wide thresholds. In such a study, SANDAG could identify the amount of development the ecosystem can handle, and then set threshold limit targets for resources, and make planning and development decisions contingent on those threshold targets.

While some researchers debate whether or not true carrying capacity of a region (or the planet for that matter) can truly be determined, and others argue about whether or not human carrying capacity is infinite, the exercise of looking at how many people a place can sustain without irreversible and/or adverse impacts to natural resources is useful. Such a study could identify areas requiring restoration efforts and the additional infrastructure development needed to restore ecosystem integrity (e.g. wastewater and stormwater treatment facilities) before negatively impacting the population.

While such a study should be separate from SANDAG's Growth Management Policies Study, a discussion of such a study and the impacts it could have on growth management and land use planning is pertinent to any discussion of growth management, land use, public health, environmental, and transportation policies. The National Wildlife Federation would welcome the opportunity to assist SANDAG in scoping such a carrying capacity study for San Diego County.

San Diego could draw on methodology from existing state and regional studies on carrying capacity and functional assessments of ecosystems. Some of the better studies of which we are aware include those done in Oak Island, NC, Sanibel Island, FL, and one for the Florida Keys region. Even if the study is not codified into regulation, it can serve as a valuable guide to future decisions.

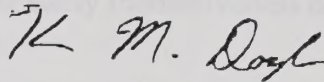
Lastly, the absence of a discussion about family planning in a study about growth management policies is a cause for serious concern.

Contrary to the preliminary conclusions drawn in the SANDAG report, **local governments do have the ability to affect population growth rates.** Worldwide, programs aimed at providing voluntary family planning assistance, improved educational opportunities for women and girls, and financial incentives for women to start small business have helped reduce fertility rates

(the average number of children a woman will have in her lifetime). Studies show that fertility rates drop most rapidly where there are improved child survival rates, higher education levels, and workable voluntary family planning policies. SANDAG should, therefore, investigate how investing in such programs can not only impact the population growth rate, but also bring about significant health and economic benefits to the region.

Again, we applaud SANDAG for undertaking this important study, and hope that these comments will help shape further analysis of local growth management policies prior to submitting the full report to the SANDAG Board.

Sincerely yours,



Kevin M. Doyle
Director



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April 23, 2001

Kevin M. Doyle
National Wildlife Federation
3500 Fifth Avenue, Suite 101
San Diego, CA 92103

Dear Mr. Doyle:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region." I will address each of the points made in your letter individually:

Comment 1: The study focuses only on the negative impacts of stopping or slowing growth, and does not discuss the positive benefits associated with population reduction. Perhaps this can be achieved by asking an additional question: what might the impacts be if we do not attempt to slow or stop population growth?"

Response 1: This study had a relatively narrow focus: to determine if public policies can stop or slow growth. Although there are benefits associated with slower population growth, this study concludes that local public policies cannot significantly slow growth. Some amount of growth is inevitable and our primary obligation is to plan for it and manage it responsibly. However, one of the "Other Topics" mentioned at the end of the Executive Summary is a study comparing the costs of growth to the costs of limiting growth.

Comment 2: The question of whether or not a carrying capacity for the region should be established and enforced through public policies is misguided and is poorly addressed in this study. Even if a carrying capacity discussion is not included in this particular study, it is a useful exercise for the region and can provide valuable insight into the limitations to growth.

Response 2: The study is intended to evaluate the ability of local public policies to slow growth and concludes that even if the region were to set a population carrying capacity, it could not be enforced. The study makes no particular judgment on whether the region should attempt to determine its carrying capacity. It does state that such a study could provide additional insights to regional growth issues. However, establishing a carrying capacity for the region would not change the basic findings or conclusions of this study.

Comment 3: The absence of a discussion about family planning is a cause for concern.

Response 3: We have added discussion of local family planning to Section II of the study. While government has no direct control over fertility rates, it could target more resources toward family planning and public health education and lend a strong voice toward advocating for national family planning policies. However, there are a number of reasons why expanding family planning programs in the San Diego region would be ineffective at slowing growth. First, certain national policies, such as those inherent to the income tax system, tend to promote fertility. Second, preventing unwanted births is only one of many goals of family planning policies, and additional reductions in unwanted births will be increasingly difficult to achieve. Most significantly, though, policies implemented locally will be diluted by the large volume of population movement into and out of the region. Family planning programs have been, and continue to be successful in providing a number of benefits (including smaller family size). These are not arguments against expanding family planning programs. They do, however, acknowledge the likely ineffectiveness of these programs as a policy to slow population growth within a region.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk

BONSALL AREA FOR A RURAL COMMUNITY
(BARC)
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To: Mr. Paul Kavanaugh, SANDAG
San Diego Association of Government
401 B Street, Suite 800
San Diego, CA 92101-4231
FAX 619 595 5305

7 April 2001

Subject: Comments on Evaluation of Slow Growth Policies in the San Diego Region

With regards to the questions raised in your letter:

1. Is growth in the region inevitable, or can growth be stopped or slowed?
Growth will occur! However, the question(s) of slowing growth *was not* adequately addressed. The question of how much, how fast and how to channel was not addressed. Managed growth is apparently left to another effort.
2. Why a million more people by 2020, as opposed to a lesser amount?
This question *was not* answered, but asserted in the report.
3. What might the impacts be if we tried to stop or slow growth?
It was the consensus of the attendees that this question *was not* adequately addressed or answered.
4. Can a carrying capacity for the region be established and enforced through public policy?
The report stated that this concept could not be established and *failed to address* this issue.

With regards to the report, some general comments:

Report appears to be an update of prior studies and does not offer any vision on dealing with growth. The report addresses only the economics of the policies considered and does not consider the degradation to quality of life due to growth. It was stated that the Region 2020 effort would address the "Quality of Life" issue *however, material available to me indicates that only lip service is being provided on this major issue.*

*The perceived mentality of planners is that the highest economic use of the land is the best use. Perpetuation of this concept is the cause of many of our problems. **Incremental developments add up to colossal problems***

As you are aware, growth in itself has two components, *job growth and population growth*, each are equally important and unfortunately only half of the growth problem was considered in the report. *SANDAG needs to be providing timely regional planning direction on all regional issues.*

It appears that the study was undertaken to address *only those aspects of growth deemed appropriate*. Therefore, what was not say is as important and what was said. Having embarked on a course of study, the analysis is basically the results of modeling analysis. *Modeling has four aspects to it; first and foremost is the modeling capability (how well does it models the problem presented), second is the simulation run setup (what variables were allowed to vary), third is the input data to be*

used(how valid are the assumptions regarding household size and employment density), and finally the interpretation to be given to the results. Since I am not familiar with the models SANDAG employees I cannot address these issues, however it is important to address all four components in the report. ***You need to present a case of credibility.*** If any aspect is deemed faulty, the value of the analysis will be downgraded accordingly. It appears that the input data used represents historical data and may not accurately reflect the future and it was noted that negative policy conclusions are made without justification and that other policies may be more successful.

The modeling assumes that adjustments will occur to make the policy ineffective. These assumptions insure that the outcome supports the stated conclusions What is the expectation of this occurring?

At the outset, the report states that job cause growth. However, in the conclusions of the analysis it is stated that job growth slowing policies are ineffective. ***Intuitively, this is difficult to accept.*** *Shouldn't carrying capacity be considered as a means to address the underlying issues such as, location of growth, density, timing of development, environment needs, plans for preserving agriculture, infrastructure availability, etc, etc, etc.*

Where are the thresholds of pain when we say enough is enough???

During the meeting on 28 March 2001, a number of comments were made suggesting that ***"the findings were pre ordained and were not supported by substantive analysis"***. *A number of the attendees echoed this sentiment.* It was also pointed out that the concept of *natural population increase was grossly misleading* and needs to be corrected. The consultants used in the study need to be identified as well as the role they played in the study.

Some specific questions which should be addressed:

p. 3: ***What levels of inconvenience is the population willing to tolerate?***

Local government does have some control on births in the region **through education.**

p.4 It appears that Marin County has been successful in slowing growth. Why does it work there?
How should community general plans be structured to slow growth?

Should timing of growth be considered (if we have a carrying capacity established) ?

It appears that only examples supporting the conclusions were included.

How do we know that household size and employment density will respond as modeled throughout the region? This is an example of influencing the results.

p.10 **Need to discuss fiscal reform**

p.11 "Finally, a growth management strategy..." where is this laid out?

P.13 Regarding questions... ***only the easy questions were asked.***

What about population controls through education?

What about growth impact on quality of life ?

The region has no policy on preserving agriculture land...the prevailing attitude is that economics will dictate land use. Under this NO policy, agriculture is doomed.

What is the regions policy on preserving the environment? MSCP/MHCP ***is not*** the complete answer While it is a step in the right direction it needs lots of help.

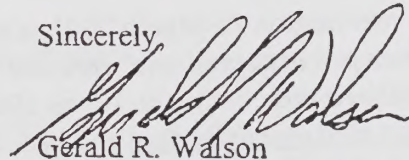
What is our infrastructure deficit?

Pushing growth to sustainable areas does not solve the negative impacts of growth

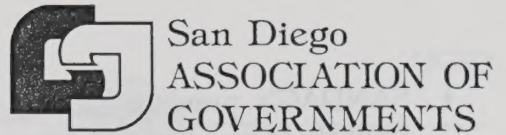
What impact does the illegal population have?

- P.15 The report states that the region has no control over policy outside its jurisdiction, **however, public pressure can influence state and federal policy.**
- p.24 The housing unit shortfall was attributed to in-commuters. Is this the only explanation?
The housing unit shortfall is an example of historical data failing to predict the future.
- P.31 Local governments depend upon sales tax revenue... Do these developments pay their way?
Are these developments beneficial to quality of life (how many strip malls do we need)?
- P 57 DIF are just fees and do not address the question, are the services available without impact to existing residents? *No good measures exist to gage the impact addition development will have on the region. As a result **incremental developments add up to colossal problems.***
- P 61 *What does it take to implement a program such as the British Green Belt program and what would its impact be on regional planning?*
- P 64 The reports states that, rapid increases in population and are usually attributable to economic opportunities. **What policies will reduce economic opportunities?**
- P 79 It appears that the results reached are based upon the conclusion *that there are no studies to point to that support policies which are effective in slowing growth* and the analysis is designed to agree with prior studies.

Sincerely,



Gerald R. Walson
President of BARC



April 24, 2001

Gerald M. Walson
Bonsall Area for a Rural Community (BARC)
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Bonsall, CA 92003-0088

401 B Street, Suite 800
San Diego, CA 92101-4231
(619) 595-5300 • Fax (619) 595-5305
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Dear Mr. Walson:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of the SANDAG Board, the next step may be to address these and other related issues.

With regard to your general comments:

- Although there are benefits associated with slower population growth, this study concludes that local public policies cannot significantly slow growth. Some amount of growth is inevitable and our primary obligation is to plan for it and manage it responsibly.
- Marin County has not slowed population growth. Marin's policies have shifted growth to surrounding communities, which have grown rapidly. The impacts of this growth are still felt in Marin County.
- The study concludes that even if the region were to set a carrying capacity, it could not be enforced. The study makes no judgment on whether the region should attempt to determine its carrying capacity. Such a study could provide additional insights to regional growth issues. However, establishing a carrying capacity for the region would not change the basic findings or conclusions of this report.
- We did not structure our assumptions to predetermine our results. The impact simulations in this study do assume that the region will adjust to policies designed to restrict housing or the economy. These assumptions and the regional adjustments are based on our research of current literature, experience from other areas, and the findings from our simulations. For example, slowing population growth by eight percent by limiting housing units would entail greater levels of commuting into the region, worsen housing affordability, and encourage over crowding in existing units. We agree that some of the statements in our earlier draft were unsubstantiated, so we either removed them or included evidence to support the statement. We have rewritten Section II of the study to clarify the assumptions, and the forecast assumptions are included in Appendix A of the study.

- SANDAG's previous studies on growth slowing policies simulated policies that were unlikely to be adopted in the region. The purpose of these simulations was to illustrate the degree of policy implementation necessary to influence population growth. By enacting the most severe restrictions these studies showed that it was possible to slow population growth. However, these policies were dismissed due to their negative impacts and difficulty of implementation. This study explores more realistic policies that could be adopted, and evaluates their growth-slowing potential. This approach was supported by our panel of experts. We have added a discussion of previous growth policy studies to Section III of the study.
- We have also revised the discussion of the housing unit shortfall between 1980 and 2000 in Section II.
- While local family planning policies may be able to reduce fertility rates for some existing residents, they have no control over national and international fertility rates. Because there is a large amount of movement into and out of the region every year, and because it is not a policy option to limit the number of children a couple can have, it will be difficult for local family planning policies to significantly reduce population growth in the region. We have included additional discussion of this topic in Section II of the study.
- Immigration policy is determined and enforced by the federal government and is beyond the control of local jurisdictions. Furthermore, the regional impact of the federal government limiting international migration is unclear. First, domestic in-migration may increase to meet the local demand for labor no longer filled by international migration. Second, the region's share of the nation's international migration might change. Additional discussion on immigration has been included in Section II. The population impacts of undocumented migrants are included in the overall population forecast.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk



Richard T. Carson
Professor

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April 10, 2001

Paul Kavanaugh
Project Manager
San Diego Association of Governments
404 B Street, Suite 800
San Diego, CA 92101

Dear Mr. Kavanaugh:

Your notes (4/2/01) on the March 28, 2001 meeting of the Citizen Review Panel for the SANDAG report "Evaluation of Slow Growth Policies in the San Diego Region" suggest both confusion and divergent opinions with respect to SANDAG's simulation of a policy to slow growth by a 40% reduction in new housing starts. Much of the disagreement stems from divergent beliefs concerning whether there was a housing shortfall between 1980 and 2000 and, if so, whether its use in calculating a "leakage" factor in the form of increasing household size was appropriate. SANDAG's claim is that the reaction to any policy which decreased housing starts (or equivalently increased housing costs) would be largely ineffective in terms of slowing projected growth in San Diego County's population because average household size would substantially increase in response to such a policy.

I have now looked more closely at this issue and found that the SANDAG estimate that there would be a large increase in household size [from 2.81 to 3.06] in response to a policy that reduced new housing starts by 40% cannot be support based upon an empirical estimate from 1990 Census county level data. Substituting the estimate [an increase from 2.81 to 2.83] based upon the much richer Census dataset for the SANDAG estimate suggests that the simulated housing policy would be a *very* effective intervention (a decrease in the growth of the baseline population of 272,300 relative to the 297,200 reduction that would be expected if household size did not increase) rather than *largely* ineffective policy intervention (a reduction of only 74,900 [p.6]) as suggested by SANDAG.

The main driver (p.26) of the housing policy simulation result that restricting the supply of housing would be largely ineffective is an elasticity estimate (1.99) of housing price to the alleged shortfall in the housing supply. Housing prices are said to have increased (in real terms) by 17.4% from 1980 to 2000 while the shortfall in housing is estimated to have been 8.7%. The 8.7% figure is obtained by making the assumption that the household size in 1980

was the “preferred” household size and would have been the one observed in 2000 if not for the housing shortfall. The elasticity of 1.99 is obtained by taking the ratio of 17.4% to 8.7%.

There are two difficulties with respect to how this elasticity of the housing price to housing supply was calculated. First, the report provides no evidence to suggest why the 1980 household size would have been observed in 2000 without the alleged housing shortfall and, second, the concept of “preferred” household size is meaningless in the absence of price consideration. Most of us would like a 10,000 square foot house overlooking the ocean if we did not have to pay for it.

The observable behavior relationship from an individual’s perspective is the relationship between household size and household price. There is, of course, a one-to-one relationship between the elasticity of household price and housing shortfall as used by SANDAG and the elasticity of household size with respect to home price. Knowledge of the underlying information used to calculate one of the elasticities can be used to calculate the other. This information can be found in Table 1 (p. 26). Conceptually, the household size to housing price relationship is a better way of looking at the situation because it only relies upon how responsive household size is to housing price, and not some ill-defined notion of a housing shortfall. (This calculation is indifferent between two competing (but partial) stories: (a) higher housing prices reduced the demand for housing so that fewer new units were built or (b) fewer new units were built and as a consequence housing prices increased.) Taking the ratio of the projected percentage in household size (8.9% [3.06/2.81]) associated with the percentage increase in housing prices (19.7% [\$444,200/\$371,100]) yields an elasticity estimate of 0.45. This estimate implies that a doubling of housing prices would be associated with a 45% increase in household size.

This 0.45 elasticity assumption is quite large. If this estimate were correct, it would suggest that any type of policy that restricts housing/raises housing prices would be largely ineffective in reducing projected population growth. What is important to recognize about this estimate is that it effectively assumes that there are no other forces influencing the observed change in household size between 1980 and 2000 other than the number of housing units or equivalently the change in housing price. The assumption can be checked by using the 1990 Census of Population and Housing data as reported in the U.S. Census Bureau’s 1994 *County and City Data Book* (available on-line at <http://fisher.lib.virginia.edu/ccdb>). This data set provides information on the basic demographic composition of each county including demographic information related to age structure, percent foreign born, sex ratios, educational attainment and per capita income, population density, average travel time and home prices. The advantage of a cross-section of county level data is that it allows one to control for a wide variety of factors, the effectiveness of which cannot be adequately sorted out using data from a single county. The 1990 Census data represents the mid-year of the time period considered by SANDAG in obtaining its 0.45 elasticity estimate. The year 2000 Census data could be used to re-estimate the model as soon as it is available.

The regression model (reported in the Appendix below) is estimated in log-log form so that the parameter estimates can be directly interpreted as elasticities. The results show that the percentage of the age 17 and under population is the main factor influencing differences in household size across the United States. These results suggest that a 1% change in the percent of the population 17 and under will increase household size by 0.38%.

All other elasticities, while highly significant in a statistical sense, are an order of magnitude smaller in absolute value. Household size is decreasing in percent of the population 65 or older, increasing in the percent of the population that is foreign born, increasing in the number of males per 100 females, decreasing in the percentage of high school and college graduates, increasing in population density, decreasing in per capita income, increasing in terms of the average work travel time, and increasing in terms of home price.

The elasticity of household size with respect to home price using the Census County dataset suggests an elasticity of 0.0389. This result suggests that the SANDAG estimate of the magnitude the “leakage” factor is 100 times too large (0.45 compared to 0.04). The main reason for the difference between the SANDAG and Census-based estimates appears to be that demographic and other factors that lie behind the observed increase in household size in San Diego were not taken account of in the derivation of SANDAG’s estimate and SANDAG’s mistaking a lack of housing for low income people for an overall regionwide housing shortage.

The SANDAG housing policy increases housing prices by \$73,100 to achieve a 40% in the number of housing units built. This results in 138,700 fewer new houses being built. The decrease in projected baseline population from doing this (assuming “no leakage [household size remains 2.81]” relative to the baseline) would be 297,200 people. With the leakage factor [household size increases to 2.83] I estimate using the 1990 county Census information; the decrease in projected population is 272,300. This suggests that the increase in household size associated with an increase in housing price would make the simulated policy less effective by approximately 25,000 people than would occur in the no leakage case. This can be contrasted with the leakage estimate used in the SANDAG simulation [household size increases to 3.06]. This estimate results in a decrease in the projected baseline population of only 74,900 suggesting that the policy would be largely ineffective in reducing population growth.

One way to view these results is that the leakage factor estimated from the Census data suggests that SANDAG’s policy that reduces housing starts by 40% is 92% effective in terms of reducing the projected baseline population increase relative to the case where household size remains unchanged. In contrast, the SANDAG assumption on leakage results in the housing policy being only 25% effect.

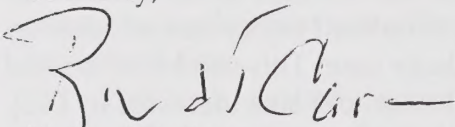
The model based upon the Census data can also be used to address the question about whether there was a housing shortfall in San Diego County through 1990. The actual household size reported by Census is 2.69 persons per household. The model predicts that one should observe 2.75 persons per household given the values of the predictor variables for San Diego County. If there had been a housing shortfall in San Diego County one would have expected to see the predicted value for San Diego considerably smaller than the observed value. Instead, the predicted value is actually larger than the observed value suggesting that given the conditions that existed in 1990 that one would have expected to see household size rise in the post-1990 period.

The preliminary census estimate on the key variable for 2000 in the model, the percent of the population 17 and under (25.7% in 2000 versus 24.4% in 1990), suggests an increase in the 1990 predicted household size of 2.75 to the 2000 observed household size, 2.81.

SANDAG should consider rerunning all of its current housing policy scenarios with a household size to home price elasticity of 0.0389. This would result in more realistic estimates of likely impacts in those scenarios than contained in the current draft report. Over the longer term, SANDAG should consider developing a richer model that contains linkages to the forces driving per capita income and a larger set of quality of life indicators than the average travel time to work variable used here. Such a model should also formally link conditions in San Diego to other California regions that are its direct competitors. Finally, I note that there are other problems with the model underlying the Table E-1 simulation results (p. 6) such as housing prices increasing by \$73,100 over the baseline while being accompanied by no change in per capita income and the projected reduction in the population of 74,900 from the baseline while being accompanied by no reduction in the number of civilian jobs. These problems need to be corrected before the SANDAG model should be relied upon by local officials for use in evaluating policies of the type examined in "Evaluation of Slow Growth Policies in the San Diego Region."

I hope this information is useful to SANDAG and its members in considering various policies related to growth and the quality of life in the San Diego region.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard T. Carson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Richard T. Carson
Professor of Economics

APPENDIX

The regression model reported below uses county level data from the 1994 County and City Data Book based on the 1990 Census of Population and Housing. The variables chosen for the model try to get at the basic demographic structure of a county's population in terms of age (percentage 17 and under and percentage 65 and over), the percentage of the population who are foreign born, the number of males relative to female, the percentage of the population over 25 who are high school graduates and the percentage of the population over 25 who are college graduates, and per capita income. Three variables related to land and housing are included. These are population density per square mile (1990 population/county area), average one-way travel time to work, and median price of owner occupied housing. The dependent variable is household size (average persons per household). All variables were used in log-form, which results in a model where the coefficients can be interpreted as constant elasticities. (Taking logs necessitated dropping a small number of counties where the percent of the population that was foreign born was zero.) Two other variables were examined. The first of these was average rental price in place of median price of owner occupied housing. These results are similar to those reported below. The second was the addition of the Hispanic percentage of the population. This did not appreciably improve the variance explained by the model, if the age structure of the population and the percent foreign born had already been accounted for.

Model: MODEL1
Dependent Variable: Log(Persons per Household)

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	14.32661	1.43266	1607.81	<.0001
Error	3098	2.76051	0.00089106		
Corrected Total	3108	17.08712			
Root MSE		0.02985	R-Square	0.8384	
Dependent Mean		0.96485	Adj R-Sq	0.8379	
Coeff Var		3.09383			

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	-0.13338	0.07521	-1.77	0.0762
Log(% Age 0-17 in Pop)	1	0.38291	0.00598	64.05	<.0001
Log(% Age 65+ in Pop)	1	-0.06186	0.00282	-21.92	<.0001
Log(% Foreign Born in Pop)	1	0.00369	0.00067	5.56	<.0001
Log(Males per 100 Females)	1	0.09647	0.01122	8.60	<.0001
Log(% High School Grads)	1	-0.07352	0.00640	-11.49	<.0001
Log(% College Grads)	1	-0.00892	0.00261	-3.41	0.0006
Log(Per Capita Income)	1	-0.06506	0.00501	-12.99	<.0001
Log(Pop Density Sq. Mile)	1	0.00525	0.00052	10.17	<.0001
Log(Travel Time)	1	0.02188	0.00277	7.91	<.0001
Log(Median Home Value)	1	0.03891	0.00254	15.33	<.0001

The 1990 values of these variables for San Diego County are Persons per household, 2.69, Age (0-17) 24.4%, Age (65+) 10.9%, Percent Foreign Born 7.2%, Males per 100 Females 103.9, Percent High School Graduates 89.9%, Percent College Graduates 25.3%, Per Capita Income \$16,220, Population Density 594.1 sq. Mile, Travel Time 22.2 minutes, Home Value \$186,700.

April 25, 2001

Richard T. Carson
Department of Economics
University of California, San Diego
210 Economics Building, 0508
La Jolla, CA 92093-0508

Dear Mr. Carson:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

SANDAG staff has read your letters and provided responses to your questions. The structure of the responses is based around your first letter, dated March 27, 2001. The responses also address your letter dated April 10, 2001.

Paragraph 2: The study addresses the wrong questions. Citizens in the region are not concerned with population growth per se, but quality of life.

Response: We agree that quality of life is an important issue. However, many people in the region do care about population growth, and the SANDAG Board determined that the primary focus of this study was to answer several questions related to the region's forecasted growth.

Paragraph 3: Findings in the study seem preordained, and the study makes unsubstantiated claims. For example, the conclusion of the study claims that "policies designed to slow growth are likely to meet with resistance because the estimated negative impacts and unknown consequences far outweigh the estimated positive impacts."

Response: This claim is based on our research of current literature and the findings from our simulations. For example, slowing population growth by eight percent by limiting housing units would entail greater levels of commuting into the region, worsen housing affordability, and encourage overcrowding in existing units. We agree that some of the statements were unsubstantiated, so we either removed them or included evidence to support the statement.

Paragraph 4: Results based on the assumption that between 1980 to 2000 there was a shortage of housing are misguided, as there was no San Diego regionwide prohibition on housing starts over this time period.

Response:

We believe that there is a sufficient amount of evidence to prove a housing shortage at both the regional and state levels. A recent study for the California Department of Housing and Community Development concludes that California “chronically under-produces housing, especially in coastal markets.” In the region, low vacancy rates and housing price increases over this time period indicate a relative shortage of housing supply compared to demand. Also, the ratio of job and population growth to housing unit growth has increased, as relatively fewer housing units are built for each job created. Rapid levels of residential growth in Baja California and Southwestern Riverside County also support the concept of a shortage of housing in the San Diego region. Lastly, the state fiscal system discourages local jurisdictions from designating land for housing.

Your letter dated March 27 claims that “no change in per capita income” is inconsistent with higher home prices. In our simulation and in the baseline forecast, real per capita income increases by 16 percent between 2000 and 2020. In the simulation of a policy restricting housing units, inflation-adjusted home prices increase by 39 percent. Housing price increases that outpace increases in income are not unprecedented. For example, between 1970 and 1990, inflation adjusted home prices in the San Diego region increased 115 percent, while real per capita income increased only 13 percent. Housing affordability in the San Diego region is low relative to other areas. This signifies that fewer people can afford to buy a home in this region than people making comparable incomes elsewhere. Residents of the San Diego region contribute a greater proportion of their income to housing.

We believe that the household size assumption is correct. The regional household size increase between 1980 to 2000 was due in part to a shortage of supply compared to demand. The assumption is based on the finding that factors other than demographics cause household size to increase. More specifically, household size in the U.S. fell between 1980 and 2000. Controlling for demographic factors (age, sex, and ethnicity), we would expect household size in the San Diego region to decrease over the same time period. It did not. Also, as noted in your regression analysis, a major determinant of household size is the population under age 17. The share of the population 17 and under in the region was the same in 1980 and 2000 (25.7 percent in 2000 and 25.6 percent in 1980).

We did not conduct our housing restriction simulation as you indicated in your April 10 letter. The simulation does not increase prices \$73,000 to achieve a reduction in housing units. Home price increases are an outcome of the simulation, and do not drive the decrease in units. Our simulation shows that the region’s population will adjust to a restriction on units by increasing household size and inter-regional commuting. We focus on two relationships: household size related to the shortfall in housing units and housing price increases related to a shortfall in units. Both of the relationship adjustments in the simulation are consistent with historical trends. We have clarified the study to better explain why we believe that household size increases observed between 1980 and 2000 are not unreasonable.

We recognize that there are other approaches to computing elasticities, such as the regression method you presented. However, we have some concerns about the results of your analysis, its applicability to the San Diego region, and the interpretation of the coefficients. First, the analysis includes all counties in the U.S. We question if the parameters established are applicable to our region. Second, the model may be misspecified because the analysis does not include any variable that attempts to measure whether the supply of units equals the demand for units, which is a potential contributor to higher household sizes. Third, we feel that cross-sectional data is inadequate to compute elasticities that attempt to measure change over time. We will be looking closely at the household size parameter when we update our forecast, incorporating the 2000 census after more detailed data is released later this year.

Paragraphs 5 and 6: The economic and demographic model used in this study is inadequate for the purpose of addressing the issues raised. In particular, the model lacks behavioral parameters that link housing prices, commercial/industrial rents, income, and area amenities. It also lacks the perspective that regions compete for the marginal migrant on three dimensions: wage structure; housing costs, and amenity levels. Manifestation of these problems can be seen in the results of the simulations.

Response: For most of the simulations, we do not use our forecast model. The simulation results are derived primarily from a series of relationships developed from empirical evidence and research. The equations used in the simulations are included in Appendix C of the study.

SANDAG's Demographic and Economic Forecast Model (DEFM) incorporates home prices and wage variables through the consumer price index (CPI) and a regional competitive index. The CPI speaks to the region's relative affordability and cost of living compared to other areas. The regional competitive index is computed to represent the relative costs of doing business in the San Diego region. Rents and amenities are not explicitly specified in the DEFM equations, but are accounted for in the historical data used to calibrate the econometric relationships. Higher prices in the region slow employment growth, reducing the demand for domestic migration. This results in slower population growth and housing demand.

The model also incorporates increasing productivity, which we feel is a fourth dimension of regional competitiveness. Firms value the productivity level of a region.

Paragraphs 7 and 8: The study contains two misleading concepts. First, the increase in population growth is due largely to the natural increase in the region's population. Many people born in the San Diego region are moving away from here. Second, that increased housing costs, of necessity, disadvantage the poor to a greater extent than other income categories.

Response: The study does not claim for whom the additional housing units will be built. We do not differentiate between the children of current residents and the children of future residents who settle here sometime during the forecast period. There are large flows of in and out migration every year, resulting in some children leaving and some arriving; our forecast focuses on the net effect in the region.

Policies that increase housing costs do disadvantage lower income families to a greater extent because low-income families pay a greater percentage of their total income to housing. In order to reduce the impact on low-income families, any policy that increases the cost of housing would also have to increase subsidies for low-income housing, or increase wages in the region.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/cd

APRIL 10, 2001

To: Paul Kavanaugh, SANDAG

From: Nico Calavita, Professor, Graduate Program in City Planning, SDSU

Subject: Evaluation of Slow Growth Policies in the San Diego Region Report

I have reviewed the first version of the Growth Policies Analysis and the more recent report, Evaluation of Slow Growth Policies in the San Diego Region. I participated in the March 5th SANDAG meeting with the outside experts, and the March 28 meeting of the Citizens' Review Panel. I should also mention that I have researched extensively the issue of growth limitations and growth management during the past 15 years, especially in the San Diego context, and have published several articles and book chapters on the subject.

What follows are my comments, divided into two main sections. The first includes comments on the report itself, while the second part presents an alternative flexible strategy that could – if implemented judiciously – help implement smart growth and maintain our quality of life without necessarily slowing growth.

I. Comments on report.

The report is absolutely correct that the state of the economy drives population growth. The region lost population during the early 1990s period of economic contraction, and probably more than has been assumed, given that the 2000 Census figures reflect approximately 100,000 fewer people than previously estimated. Limiting housing, then, is the most pernicious possible approach. It would not address the demand side for housing, leading to such unacceptable dislocations and social imbalances, that the economy would eventually suffer.

Housing limitations, however, might be tempting to certain jurisdictions that would like to continue to pursue economic growth, while dumping on adjacent localities the demand for housing they generate. Such behavior reflects ambivalence about growth. We like its economic benefits, but we loathe the problems that it generates -- the strains on the infrastructure, loss of open space, pollution, etc. The danger of selfish behavior on the part of single jurisdictions that would shift their housing needs into adjacent communities is another reason for regional governance and a more equitable distribution of the benefits and burdens of growth.

The report's examination of restrictions on non-residential development, while correct in its approach, seems far-fetched in its conclusion. It strains credibility that drastic restrictions on non-residential development would not affect the number of jobs in the region (see table 4). Restrictions on non-residential development would limit economic development also because such restrictions would signal an end to the business-friendly policies of this region and discourage companies from moving or expanding in the region.

The third alternative presented, "Targeting public expenditures," while attractive on the surface, is problematic in its implementation. Unless we drastically improve our educational system to make it possible for residents to become employed in "new economy" jobs, this approach would bring additional migrants to the region. This alternative is a continuation and strengthening of SANDAG's existing economic development strategy, i.e., to create high-wage jobs in fast growing high-tech industry clusters. Unfortunately this strategy, while important, leaves behind about 80% of the work force, a great portion of which works for low wages and no benefits. Recent reports produced by the Center on Policy Initiatives, Prosperity and Poverty in the New Economy and Planning for Shared Prosperity or Growing Inequality? have pointed out that jobs in the San Diego region are being produced at both the high and low ends of the labor market and that to avoid a two-tiered society we need policy initiatives for shared prosperity as well. An even more recent study of the Council on Competitiveness has stressed the need to boost wages and benefits in order to raise the standard of living for most residents in San Diego. It should be mentioned that raising the standard of living can help improve educational attainment and reduce fertility rates, given the connection between low educational attainment and high fertility rates and poverty levels.

Overall, the report seems to concentrate on the problems that slow-growth programs would engender without assessing the potential benefits. If limiting growth is problematic, so is rapid growth. Any decision to limit growth would have to be based on a cost-benefit analysis. In fact, the original scope of services for this study included an

assessment of “the likely effects of implementing growth controls and not implementing growth controls with respect to the short term (next 10 years) and long term (next 50 years) economic impacts, environmental impacts, and other quality of life factors such as the provision of adequate infrastructure, public facilities and services” (emphasis added). The report, as it stands, fails to do that. Without such an analysis it would be difficult for SANDAG to make any decision about slowing growth.

II. Quality of life and public facilities financing

The demand for growth limitations is fueled by the public perception that growth is lowering their quality of life. If growth outpaces the ability to provide the necessary public facilities and services, then people will start pressing for growth limitations.

Quality of life then is directly related to our ability to fund the necessary infrastructure. In this sense, quality of life is a function of money. Thus, the questions we need to ask are: How much is growth going to cost in the San Diego region? Where is the money going to come from? Is it likely that the region will generate the necessary funding to maintain our quality of life?

I am not aware of any analysis that has tried to price out all costs of growth in the San Diego region for the next 20 years, both at the local and regional levels, beyond federal, state or developers’ contributions. We are aware, however, of the cost of some of the most important elements necessary to implement “Smart Growth.” Let’s begin with mass transit. MTDB has recently approved a 20-year Transit Works alternative that presumably is going to reorient our transportation system to make mass transit viable in the region. Price tag: \$8 billion. Operating budget: \$280 million a year. Regional transportation plan: \$12 billion. The unfunded portion is \$6 billion (actually, more funding is needed because even with \$12 billion, heavy congestion would affect 50 miles instead of the 30 miles of today). The Regional Habitat Conservation Plans will cost between \$1.5 and \$3 billion to implement with the local/regional share being between \$300 and \$500 million. The facilities deficit in the City of San Diego urban neighborhoods is at least \$2.5 billion. These figures do not include funds necessary to improve mass transit in North County, create affordable housing, improve water quality, build more courts, jails, schools, and so on.

Where is the money going to come from? Additional state funding for some of these items has been mentioned before, but given the energy related expenditures of the state, it is unlikely that much help will come from that source for quite some time, or the federal government for that matter. That leaves the localities and the region at large as the only

sources of revenue to pay for "Smart Growth." Discussions are taking place to extend the use of TransNet funding (one quarter of a cent sales tax approved by the voters in 1988 that will expire in 2008). Even if approved by two thirds of the voters, the proceeds of the tax will help pay for only a portion of the needs outlined before, and certainly not the city of San Diego public facilities deficit. Both the region and localities need additional sources of funding to pay for "Smart Growth." Two sources come to mind: Regional Development Impact Fees; and taxes and fees on economic activity such as business taxes, real estate transaction taxes, Transit Occupancy Taxes, Linkage Fees, etc. The possibility of a regional payroll tax has been discussed in the report.

- Regional Development Impact Fees

Regional Development Impact fees have been considered on various occasions, but never implemented. Transportation fees in particular have the potential to generate large amounts of revenue, but concern about their impacts on development has impeded implementation. A March 4, 1999 SANDAG report, "Development Fees for Regional Transportation Facilities" concluded that even with a fee of \$1,286 per trip, about half of what could be charged legally, the impact on commercial and industrial development would be very high. But the fees do not need to be that high, if used in conjunction with other sources of revenue. It seems reasonable that new development should help pay for the needs it generates, and almost all of the costs associated with SANDAG'S \$12 billion preferred transportation plan – a plan that would not reduce existing congestion levels - can be attributed to new jobs and new households.

Also, the issue of who pays for regional development impact fees needs to be revisited. The SANDAG report points to consumers, and in the case of a recessionary period, developers. The fact that land owners might have to lower their prices when selling to developers in light of the additional costs, is generally dismissed by SANDAG. However, there seems to be agreement in the literature that in the long run, development costs increases will be passed backwards to the owners of the land. If it can be demonstrated that this is the case - that the land-owner would be hit the hardest - this would make the argument against regional fees less politically compelling.

- Taxes and fees on economic activities

The immediate reaction to increases of taxes and fees on economic activities or to the introduction of new ones such as a regional payroll tax would probably be that these increases would discourage economic activities, create a "business unfriendly climate" and lead to a decline of our ability to compete in the global economy. But this would be

true only if these increases were so high that they would make the region noncompetitive. The reality is that many jurisdictions in this region charge much less than the state average. The City of San Diego prides itself on its low level of business tax, ("lower than any of the 20 largest cities in the U.S."), and the lowest Real Estate Transfer and Transit Occupancy taxes in the State of California. The County of San Diego recently eliminated its business tax. Other jurisdictions in the region have low taxes on economic activities as well. While fiscal zoning is often discussed as a form of competition among localities that has deleterious consequences for the regional economy, not much is said about this other form of competition that encourages growth while robbing localities of the revenues necessary to implement "Smart Growth." The questions that need to be answered are: If we want to be at least "growth neutral," how much can we raise taxes and fees on economic activity without losing economic competitiveness? How much could be generated by the various jurisdictions if these fees and taxes were raised at least to the average in the state?

What is puzzling about these "business friendly" policies is that, in the long run, they will lead to a loss of competitiveness. It is becoming increasingly clear that the best economic incentive that regions can provide is a high level of quality of life, and that low levels of taxation, if important in the past, are largely irrelevant in the high-tech environment of today. As I mention above, quality of life costs money, and reasonable (average) levels of taxation and fees can help pay for it. The point is that to pay for the necessary facilities to implement "Smart Growth" we need multiple sources of funding. The TransNet sales tax extension will not do it – even if passed – and increases in taxes and fees will not do it by themselves either.

A multifaceted approach to revenue enhancement is also more equitable than the TransNet sales tax. First, the TransNet sales tax is a regressive tax, it will hit lower income households more heavily than upper income households. Second, it makes existing residents pay for the costs of growth at the regional level. It is doubtful that a TransNet sales extension would be approved by the voters unless it becomes clear that it is part of an overall package that will maintain our quality of life and is funded not only by residents but also by business, not only by the existing population but also by future development.

Without these sources of revenues, quality of life will decline, and hence our competitiveness. As a region, we can choose a "high" or "low -road" to development. The high road necessitates good public facilities, affordable housing, environmental protection, more advanced technologies, more "employee friendly" and productivity enhancing governance structures, and, yes, higher taxes and fees. With the low road to

development, low wages, benefits, taxes and environmental regulations will constitute our economic “attractiveness.” The region might still grow, but at the expense of quality of life.

The region finds itself at a critical juncture. It can choose the high or low road to development. Presumably we have chosen the high road because we want to accommodate growth without lowering our quality of life. But we will fail, unless we make the hard choices.

Summarizing:

- 1) The report does not assess the likely effects of implementing and not implementing growth controls. Before taking any action on growth controls a cost-benefit analysis needs to be developed.
- 2) Without adequate revenues to implement “Smart Growth” our quality of life will suffer. A multifaceted approach to revenue generation needs to be implemented based on a regionally coordinated “growth neutral” approach to economic development.



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April 23, 2001

Nico Calavita
School of Public Administration and Urban Studies
College of Professional Studies and Fine Arts
5500 Campanile Drive
San Diego, CA 92182-4505

Dear Dr. Calavita:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

This study had a relatively narrow focus: to determine if public policies can stop or slow growth. Your letter contains discussions of related issues and a number of suggestions for additional research or areas of emphasis for this study. Quality of life, growth management, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. At the end of the Executive Summary, the report suggests some other topics for further study. Subject to the direction of the SANDAG Board, the next step may be to address these and other related issues.

I will address each of the points regarding this study individually:

Comment 1: "It strains credibility that drastic restrictions on non-residential development would not affect the number of jobs in the region."

Response 1: Our simulation shows that a 40 percent reduction in new employment space over the 20 year period does not slow employment or economic growth below the baseline forecast. We agree that, at least initially, there will be a period of adjustment and some jobs may be lost. Obviously, the mix of industries in 2020 will also differ. However, the region could adapt to this policy and end up with population and employment levels similar to those in the baseline forecast. We feel that with when combined with projects "in the pipeline," higher employment densities, and decreasing vacancy rates, the additional employment space under the policy is sufficient to accommodate the projected growth in employment.

Comment 2: Targeting public expenditures is a problematic approach. Without improvements to the local education system it will likely bring more migrants to the region.

Response 2: We agree that the local labor force will be challenged by this strategy. We acknowledge the limitations of this policy and the potential for increasing population in Section II of the study.

Comment 3: The study fails to discuss the potential benefits of slowing growth.

Response 3: Although there are benefits associated with slower population growth, this study concludes that local public policies cannot significantly slow growth. Some amount of growth is inevitable and our primary obligation is to plan for it and manage it responsibly. However, one of the "Other Topics" mentioned at the end of the Executive Summary is a study comparing the costs of growth to the costs of limiting growth.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk

TOOL DEPOT

PROFESSIONAL TOOLS FOR ALL TRADES
SALES, SERVICE & REPAIR

April 11, 2001

Paul Kavanaugh
Project Manager
SANDAG, 401 B Street, Suite 800
San Diego CA 92101

Re: Slow Growth Policies

I am a former economics professor at the University of San Diego, and I am currently the owner and president of Tool Depot. I also serve as an advisor to Friends of San Diego on growth management issues. I reviewed the SANDAG draft report entitled "Evaluation of Slow Growth Policies in the San Diego Region" dated March 21, 2001, and I am compelled to comment.

First of all, the report asks important questions about San Diego. Is growth inevitable? What are the impacts of controlled growth? Unfortunately, the report does not adequately address these questions.

The report measures costs and disadvantages of controlled growth scenarios, while ignoring the potential benefits of slower rates of growth. One obvious benefit of slower growth is the reduced demand for new infrastructure, providing more monies to address deferred maintenance deficits in water, sewage, roads, parks, and beaches. Certainly the infrastructure savings should be quantified, and viewed as the opportunity cost of quality of life issues such as beaches and easily traveled roads..

The three simulations appear to be poorly planned and poorly executed. Tables 1, 2, and 3 contain the key figures for the simulations, and the results are nonsensical.

*Table 1 shows a sizable increase in home price with no change in income, even though in reality employers would be forced to pay higher wages and salaries to allow workers to afford the more expensive homes. Salaries need to be adjusted for real economic benefits such as stock options.

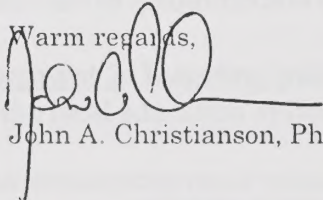
*Table 2, with 40% of the new non-residential space eliminated for 20 years, shows zero change in population, jobs, and per capita income.

*Table 3 shows increasing per capita income with decreasing home prices, a result that is highly unlikely in the real world.

It is unclear whether the model is unsuitable or the results were created by arbitrary constraints. In any case, the outcomes of the simulations have no credibility in an economic sense.

To summarize, this is an evaluation report that contributes little of value. The benefits of controlled growth are left unexplored, and the simulations are not useful. The key questions of the report are left unanswered.

Warm regards,


John A. Christianson, Ph.D.



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Dr. John Christianson
Tool Depot
3799 Gaines Street
San Diego, CA 92110

Dear Dr. Christianson:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

SANDAG staff has closely examined your letter. There are a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of SANDAG's Board, the next step may be to address these and other related issues.

More specifically, with regard to your comments on this study:

Comment: The study fails to discuss the potential benefits of slowing growth.

Response: Although there are benefits associated with slower population growth, this study concludes that local public policies cannot significantly slow growth. Some amount of growth is likely to continue and our primary obligation is to plan for it and manage it responsibly. This study is meant to answer the basic questions posed in response to the 2020 Forecast. It is intended as a starting point for continued public discussion of the issues. We recognize that there are important topics that are not fully addressed here, such as the costs and funding sources of providing the public infrastructure that is necessary or desired to support future population increases. Subject to the direction of SANDAG's Board, the next step may be to address this issue.

Comment: Home price increases without increases in income are nonsensical.

Response: Home price increases can occur without equivalent increases in income. In our simulation and in the baseline forecast, real per capita income increases by 16 percent between 2000 and 2020. In the simulation of a policy restricting housing units, inflation-adjusted home

prices increase by 39 percent. Housing price increases that outpace increases in income are not unprecedented. For example, between 1970 and 1990, inflation adjusted home prices in the San Diego region increased 115 percent, while real per capita income increased only 13 percent. Housing affordability in the San Diego region is low relative to other areas. This signifies that fewer people can afford to buy a home in this region than people making comparable incomes elsewhere. Residents of the San Diego region contribute a greater proportion of their income to housing.

Comment: The results of the non-residential space restriction are nonsensical.

Response: Our simulation shows that a 40 percent reduction in new employment space over the 20 year period does not slow employment or economic growth below the baseline forecast. We agree that, at least initially, there will be a period of adjustment and some jobs may be lost. Obviously, the mix of industries in 2020 will also differ. However, the region will adapt to this policy and end up with population and employment levels similar to those in the baseline forecast. We feel that with projects "in the pipeline," higher employment densities, and decreasing vacancy rates, the additional employment space under the policy is sufficient to accommodate the projected growth in employment.

Comment: Increasing per capita income and decreasing home prices in the targeting public expenditure simulation are nonsensical.

Response: The decreasing home prices in this simulation occur because there is less demand for housing relative to the baseline. The supply of available land for housing, is the same as the baseline.

Comment: It is unclear whether the model is unsuitable for the analysis or that the results were created by arbitrary constraints.

Response: For most of the simulations we do not use our forecast model. The simulation results are derived primarily from a series of relationships developed from empirical evidence and research. The equations used in the simulations are included in Appendix C of this study. We did nothing arbitrary in our simulations. Our assumptions are based on empirical observations, experience from other areas, and are guided by economic theory.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

Mr. Paul Kavanaugh
Project Manager
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

April 12, 2001

Dear Mr. Kavanaugh:

I wish to make some brief observations on the March 21, 2001 draft of SANDAG's report titled "Evaluation of Slow Growth Policies in the San Diego Region."

Since 1970 I have resided in San Diego, watched the ongoing environmental degradation, and taught courses at SDSU in ecology, limnology, and statistics. I am currently Professor of Biology, Director of the SDSU Center for Inland Waters, and head of a research group studying the ecology of the Salton Sea.

None of this much qualifies me to analyze technical aspects of the modeling results presented in the SANDAG report. But certain premises, assumptions, and statements in the report range from flawed to false. These errors are not subtle. Their consequences for the report's conclusions are large.

1) The report would seem more appropriately titled "Some Narrow Economic and Demographic Modeling Results" and used only as an appendix to a larger report not yet written. Major social and environmental costs associated with population growth are simply ignored. This is in keeping with the worst tradition of economic analysis where costs and benefits not easily quantified are ignored and externalized. They are missing in the model and also ignored in the interpretation and application of model outputs to the real world. This is "the dismal science" at its best!

2) Among ignored environmental costs associated with an increasing population are a) continuing degradation of every coastal lagoon and estuarine ecosystem along our coast due to increasing volumes of storm runoff (with associated 'street washings') from normal rainfall events, b) declining water quality at our beaches where much of the regional population's recreational activities take place, c) negative impacts on the Salton Sea and on Coachella and Imperial Valley agriculture due to water transfers demanded San Diego, Los Angeles, and everywhere in between, d) further destruction of much wildlife habitat, especially riparian areas and coastal sage scrub, and e) so on.

That the collective negative environmental impacts of "projected growth" will truly be massive is nowhere reflected in the report. On this ground alone, the report has NO grounds for concluding (p. 79) that "the estimated negative impacts and unknown consequences [of slowed growth] far outweigh the estimated positive impacts."

3) The report is irresponsible both in glossing over the extent to which projected future growth is due to foreign immigration and in ignoring the influence that SANDAG and its members could have on foreign immigration rates (e.g. pp. 3,4,5,15,16).

Existing information suggests that under current immigration policies and practices about two-thirds of the U.S. population increase between 2000 and 2050 will be attributable to post-2000 immigrants and their descendants. This estimate may have increased recently as the Census 2000 results indicate that we may have been underestimating the rate of illegal immigration.

It seems likely that foreign immigration will contribute proportionately more to San Diego County population growth than it will to growth of the U.S. population as a whole.

One suspects that this extreme evasion and slant to the report was calibrated to give SANDAG cover for avoiding any and all action, including even discussion, on the issue of foreign immigration.

The local universities and environmental organizations are full of folks afraid to deal with this issue in any forthright way. But SANDAG cannot shirk this responsibility.

4) Our current high rates of legal immigration are indeed set by federal law and policy. However, SANDAG and its members are in a strong position and have an obligation to make clear, via letters, resolutions and formal reports, to congressmen, senators, and the president, that the region has NO "ability to maintain its high quality of life" given the high rates of legal immigration currently permitted.

If SANDAG can't take the heat on this issue, it should drop the pretenses and simply acknowledge its task to be only that of slowing the rate of degradation of our "quality of life."

5) SANDAG is in an even stronger position to reduce population growth due to illegal immigration. This probably accounts for one-fourth to one-third of total foreign immigration. Because the federal government, specifically the president, has refused to enforce immigration law for a few decades we now appear to have possibly 11,000,000 persons in the U.S. illegally. That is about 4% of the whole population.

These illegal immigrants and visa-overstayers will have a large impact on future population growth, just as they have had on recent past population growth, especially in California.

SANDAG can continue its present accommodationist, head-in-the-sand, let-George W.-do-it stance and remain silent. Or the SANDAG staff and members can act.

Lots of actions are possible. For starters, SANDAG could request that all local law enforcement agencies give maximum cooperation to the INS in the detection, apprehension and deportation or conviction of illegal immigrants and their employers. It could urge the federal government to provide greatly increased funding for "interior enforcement". It could seek ways to implement the perfectly sound, fair and voter-approved policies that were incorporated into Proposition 187. Yes, clearly this would take unusual vision and courage.

6) The report seems to claim (e.g. pp. 7, 10) that population density is NOT one of the factors determining "quality of life" in the region. Amazing!

7) The report makes the equally bizarre claim that SANDAG could not implement a slow growth policy without first getting "the unprecedented agreement and cooperation" of every political entity from Orange County to Baja California (p. 79). What absolute balderdash! If Mexico and Orange County

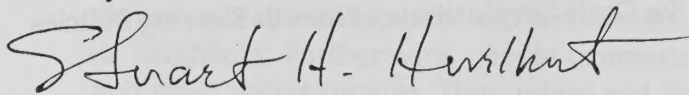
refuse to adopt policies as wise as those that MIGHT be adopted by SANDAG, then SANDAG cannot be held responsible for their problems. By the report's logic, we should not slow illegal immigration because it might increase the population of Tijuana.

8) Finally, the report takes a very dismissive attitude toward the valuable concept of carrying capacity, saying why bother to consider it since we won't be able to enforce it (e.g., p.4). That is like a medical doctor not bothering to advise an unhealthy patient on diet, exercise, and medication because he cannot force the patient to follow the advice.

The estimation of carrying capacity would be a complex task and involve consideration of values as much as consideration of technical matters. How much wild land do we want? How much does it matter if our grandchildren don't have as many opportunities or as high an environmental quality as we enjoy?

The process of attempting to define carrying capacity would be as valuable as the end product. This is not likely to be some set-in-concrete number but rather perhaps a set of scenarios each based on somewhat different assumptions. It is hard to imagine a better framework for SANDAG's transition from an accommodationist organization to a planning organization.

Sincerely,



Stuart H. Hurlbert
Professor of Biology
Director, Center for Inland Waters

April 23, 2001

Stuart H. Hurlbert
Department of Biology
College of Sciences
5500 Campanile Drive
San Diego, CA 92182-4505

Dear Dr. Hurlbert:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. At the end of the Executive Summary, the report suggests some other topics for further study. Subject to the direction of SANDAG's Board, the next step may be to address these and other related issues.

With regard to your other comments on this study:

- Regarding Comments 1 and 2: This study had a relatively narrow focus: to determine if public policies can stop or slow growth. The report concludes they cannot. Some amount of growth is inevitable and our primary obligation is to plan for it and manage it responsibly. However, your concerns about the environmental and social impacts of growth are quite justified. These are precisely the issues that a good growth management strategy should be designed to address.
- Regarding Comments 3, 4 and 5: Additional discussion of immigration policy has been added to Section II of the study. Advocating changes in immigration policies is not the same as having control over immigration, and local public policy has no control over international migration. Immigration policy is determined and enforced by the federal government. Furthermore, the regional impact of the federal government limiting international migration is unclear. First, domestic in-migration may increase to meet the local demand for labor no longer filled by international migration. Second, the region's share of the nation's

international migration might change. Perhaps most importantly, it is unlikely that the federal government will reduce international migration in the near future, and even less likely that immigration will be stopped altogether. The population impacts of undocumented migrants are included in the overall population forecast.

- Regarding Comment 6: Quality of life means different things to different people, and is an interrelated function of many variables: air quality, water quality, open space, population size, mobility, urban design, adequate amenities and services, and a strong economy, among others. Population density may or may not be one criterion. However, it is safe to say that there are residents of Wyoming and residents of Manhattan equally satisfied with their quality of life.
- Regarding Comment 7: Successfully implementing a growth slowing policy would require cooperation from surrounding areas. If growth is pushed to areas adjacent to the region's political boundaries many of the impacts of that growth still occur within the San Diego region. Pushing growth to surrounding jurisdictions would likely increase the jobs-housing imbalance in the region and cause people to commute longer distances than they would have in the absence of the policy; traffic congestion and air quality will suffer. Watersheds, air basins, natural resources and transportation corridors are shared among the region and its neighbors. Furthermore, people commute here to work, and still use our roads, water and other infrastructure. They might not be paying as much as local residents for their impacts because they pay property taxes in other jurisdictions and often shop outside of our political boundary.
- Regarding Comment 8: The study concludes that even if the region were to set a carrying capacity, it could not be enforced. The study makes no judgment on whether the region should attempt to determine its carrying capacity. Such a study could provide additional insights to regional growth issues. However, establishing a carrying capacity for the region would not change the basic findings or conclusions of this report.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk



Dedicated to preserving
the environment and
quality of life through effective
growth management

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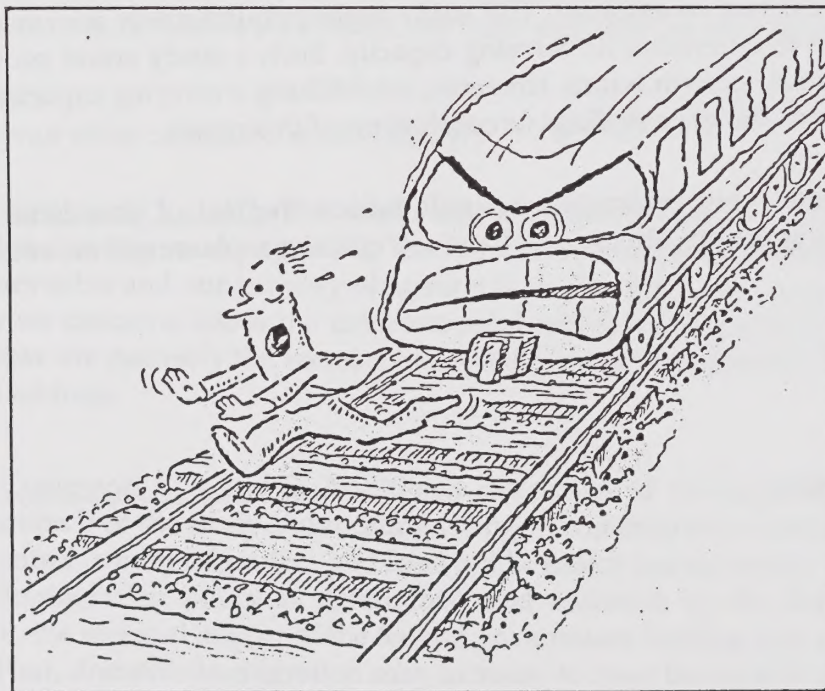
April 13, 2001

To: Paul Kavanaugh, SANDAG

From: Tom Mullaney, Chair
Friends of San Diego

Subject: **CRITIQUE of "EVALUATION OF SLOW GROWTH
POLICIES IN THE SAN DIEGO REGION"**

OUR GROUP. The Friends of San Diego was formed out of concern over the deteriorating quality of life in the San Diego region. Like other residents, we see the increasing traffic, crowded schools and parks, beach pollution, loss of open space, and rising utility costs. We see this situation as a consequence of rapid growth and look for ways to reverse the downward spiral. We believe that effective growth management policies must deal with the location, quality and amount of development, and also the provision of facilities.



TRYING TO OUTFRAN the GROWTH TRAIN

PART 1. SUMMARY OF CRITIQUE

A few parts of the report are valid. It's true that there are no turnkey growth control systems in place in other regions of the country that we could use as exact models for our region. It's also true that policies to control growth would involve some controversy. Beyond these simple observations, the report gets into trouble.

The report jumps to the conclusion that growth controls are ineffective, based on faulty methods. ***The computer simulations that are the core of the study have no credibility.*** For an explanation of this see the letters to SANDAG from economists Richard Carson (3/27/01) and John Christianson (4/12/01)

One key claim of the report is that reducing development would increase prices but not reduce population growth by very much. The reason given is that household size would increase, however, no evidence is provided that "doubling up" would occur on a regional scale. In contrast, Professor Carson in his 4/10/01 letter offers convincing information that housing prices do not have a major impact on household size. By implication, we can conclude that ***population growth is highly affected by the supply of housing.***

This study helps us judge whether forecast growth is inevitable, or whether zoning for growth facilitates growth in a self-fulfilling prophecy. From the Carson study and the fact that growth is already slowing in our region as developable land runs out, it can be concluded that increases in general plan capacities would lead to more population growth, and maintaining or restricting capacities would lead to less population growth.

Upzone it and they will come. Don't upzone it and they won't come.

The report uses so much space explaining faulty simulations that it does not adequately cover five promising growth policies, all of which can affect the location, quality and amount of growth:

GROWTH PAYING FOR ITSELF. Many polls across the country show widespread support for fees that are truly adequate to cover the full costs of new development. There are two types of fees:

1. ***Impact fees***, when applied to all types of development, fairly apportion costs to residential, industrial and commercial properties.
2. ***Business taxes*** can be levied independent of real estate development. These include TOT, license fees, and transfer taxes.

Two benefits accrue from adequate fees:

- ***Substantial amounts of money can be provided***—enough to cover the full costs of infrastructure and facilities, and maintain the current quality of life for existing and new residents.

- *Growth would probably be slowed down* if we had fees large enough to cover the true costs. Other cities and states are seeking truly comprehensive fees, with Florida being a leader in “full cost accounting”.¹

SANDAG already has the blueprints for a policy of adequate fees.

- “Regional Public Facilities Financing Plan, June 1993” points out that local jurisdictions have imposed fees to provide local facilities, and extends this approach to regional facilities.
- The draft report, “Development Fees for Regional Transportation Infrastructure, March 4, 1999” focuses on just the transportation component.

Are our public officials so averse to controversy that they will not adopt fees adequate to maintain levels of service and quality of life?

Choose one:

☐ Adequate fees

☐ Lower quality of life

ADEQUATE PUBLIC FACILITIES ORDINANCES. Many of our region’s residents can’t understand why their local governments keep authorizing new development in areas with inadequate infrastructure and facilities. For example, the City of San Diego recently authorized 1200 new homes in the traffic-clogged UTC area. And the County of San Diego is considering the authorization of huge new projects in Ramona, seemingly oblivious to the impacts on the overburdened roads and schools.

This sort of disconnect can be avoided with some willpower and a good APFO program. Chula Vista has a program for “quality-of-life threshold standards” that has received national attention. It ensures that facilities are provided before or concurrent with development.²

AGRICULTURAL PRESERVATION. We should get serious about preserving our farmland and ranchland. Besides providing a local source of food and open space, agricultural land has been shown to provide net tax benefits while developed land is usually a burden. As they say, “cows don’t go to school”.

OPEN SPACE & HABITAT ACQUISITION. Many studies have shown that it’s cheaper for government to buy land as permanent open space than it is to provide all the infrastructure, facilities and services if it’s developed. (Think of the Boulder, Colorado greenbelt program on a much larger scale.)

¹ Brad Smith, *Accounting for Sprawl*, The Tampa Tribune, April 2, 2001. www.tampatrib.com/MGA908WilLC.html.

² Porter, Douglas R., ed., *Performance Standards for Growth Management*, Planning Advisory Service Report No. 461. American Planning Association, February 1996.

As we acquire open space, by targeting sensitive habitats as the highest priority, our region can choose to sit out the “biological meltdown” of extinction predicted over the next 20-50 years for the U.S. and the planet.

URBAN LIMIT LINES. These boundaries have been used successfully in Oregon for 25 years. Why does SANDAG avoid this approach in REGION2020 planning?

**PART 2. REGION2020 IS BASICALLY SOUND,
BUT PRESSURE TO ACCOMMODATE GROWTH
ABOVE GENERAL PLAN CAPACITIES SHOULD BE REBUFFED**

The Slow Growth Polices report is hamstrung by shortcomings, and we reject most of its findings. However, the Smart Growth focus of REGION2020 is sound. Here are our key conclusions that separate the good from the bad:

- Whatever growth will occur should be kept out of the backcountry and focused into existing urban areas.
- Sprawl is costly for the region but can be very profitable for developers. Reaching a consensus on Smart Growth will be tough.
- It makes sense to coordinate land use and transportation planning.
- Mass transit should be utilized where practical.
- The growth report says we had a shortfall of housing over the last 20 years, and somehow adjusted to this, but we must accommodate all demand over the next 20 years. This is inconsistent.
- *The whole concept of “meeting demand” is nebulous, and the “Forecast—Accommodate” model should not be the basis for our region’s planning.*
- *We should not use taxpayer money to promote growth—whether in “high value added” industries or any other. High-income workers create a demand for many service jobs, and we have no ability to grow one type of industry without inducing growth in others. Boosterism adds fuel to the fire.*
- *We should reject SANDAG’s call to increase general plan capacities, except in cities which have neighborhoods that are ripe for redevelopment, and where GP densities are too low for planned projects. For example, in-fill and redevelopment may make economic sense in the Mid-City of San Diego, if adequate facilities can be provided. However, it is not productive for SANDAG staff to twist arms in cities which don’t want or need to redevelop or to densify, like Carlsbad, Coronado, Del Mar, Poway and others.*

PART 3. CRITIQUE OF SANDAG REPORT

VALID: The few parts of the report that appear to be valid are these:

1. There are not many regions in the country that serve as successful models for slowing growth. (For exceptions, see section 3 below, Regional Influence).
2. Housing caps enacted by cities have generally not been effective in slowing population growth in their region as a whole.
3. Employment growth is the major contributor towards population growth in our region. Foreign immigration is another major component which may be independent of local economic conditions.
4. A 40% reduction in the amount of new housing or in commercial/ industrial development would not create a 40% reduction in population.

NOT VALID. Unfortunately, most of the conclusions in the report are unsubstantiated by facts, and are built on fallacious reasoning. Some of the myths, conjectures and fallacies are listed below.

1. OUR CHILDREN.

The report states that 60% of the projected growth is due to natural increase.

Myth: We can't control growth because we can only influence in-migration, and in-migration accounts for only 40% of projected growth. The implication is that most of future growth is inevitable, and that we need to build massive amounts of new housing or our children won't be able to live here.

Truth: "Natural increase" is just births minus deaths. It includes births to people who haven't even moved into the region yet. So it's not all "our kids". Secondly, there is no reason to believe that a majority of kids being born this year or already in the school system will live here when they become adults. We have a tremendously mobile society. Many children will move out of the region when their parents relocate and take their families. Many others will move away when they finish high school or college. Once in the work force, many young people will accept job opportunities out of the region.

The percentage of our forecast growth due to "natural increase" has no bearing on growth being inevitable or not, and is not useful in predicting housing needs. Next time you hear a politician say that we need massive amounts of development to provide housing for our kids, ask for a reality check.

2. SANDAG's ACCURACY

Myth: Since SANDAG forecasts have been accurate in the past, the current forecast must be accepted as true.

Truth: The 2000 census revealed that our region currently has 98,000 fewer people than SANDAG estimates show. If SANDAG can't even track current population accurately, why should we have confidence in their ability to forecast trends over the next 20 years?

Truth: There are powerful reasons why the next 20 years will be different from the past 20.

- We are nearly out of vacant developable land. SANDAG says we could run out soon after 2005.
- Growth accommodation will be a self-fulfilling prophecy only if we go along. SANDAG's forecasts are based in part on availability of vacant developable land. But then the Slow Growth report claims that development will occur whether remaining land is zoned for development or not. We say "don't upzone it and they won't come".
- The public will accept increased densities only where it makes sense.
- The "Forecast/ Accommodate model is being challenged by other jurisdictions, including the Southern Calif. Assoc. of Governments
- Shortages and costs of electricity, water, natural gas and gasoline will slow down growth in California.

SANDAG's forecast for 2020 represents just one possible scenario, and should not be the basis for all land use planning.

3. REGIONAL INFLUENCE.

Myth: Effective implementation of growth control policies would require the cooperation of all 19 local jurisdictions plus Orange County, Riverside County, Imperial County and Baja California.

Truth: Many reports on California growth controls published for the last 10 years, including those by SANDAG, have stated that controls enacted by cities tend to induce growth in other parts of the region (balloon squeezing or "leakage") so that controls would have to be regional to be effective.

Most of the problems addressed by growth measures are regional in scope. ... There is leakage in the system. If one jurisdiction enacts strong growth measures, ... developers can usually move to adjacent communities within the same metropolitan area.³

Now, when SANDAG is finally studying regional growth policies, they raise the bar with a new concept of the "greater region". In reality, San Diego is a well-defined region fully capable of controlling its own destiny.

Truth: There are some success stories for regions limiting growth. As one well-known researcher stated:

... cities and counties from San Mateo County in the north to Ventura County in the south have effectively turned off the growth tap.⁴

³ Glickfield, Madelyn and Ned Devine, Regional Growth, Local Reactio, Lincoln Institute of Land Policy.

⁴ Landis, John D., *Do Growth Controls Work?*, California Policy Seminar, 1992.

4. BIRTH RATES.

Myth: Local government has no control over the number of births in the region.

Truth: Family planning has been part of American government responsibilities since Title X was enacted under President Nixon in 1970. Local governments can and do get involved in health issues, including family planning. Polls show that there is widespread support for family planning programs.

According to a 1997 poll... 76% of Americans support access to family planning, while 74% favor increased public funding for family planning services to reduce the number of unintended pregnancies.⁵

5. CARRYING CAPACITY—USEFUL CONCEPT?

Myth: Carrying capacity isn't a useful concept because technology and public tolerance can cause the capacity to increase.

Truth: There are several measures of carrying capacity. Some, like water supply, can be expanded by spending money (desalination). Other measures, like adequate water storage reservoirs and parks, don't lend themselves toward continual expansion.

- Water storage. How many valleys are there left that can be dammed up and inundated to create more water storage capacity?
- Parks. Can we add park land at a rate proportional to the growth in population? The City of San Diego would need 9000 acres of new parks to accommodate an increased population of 450,000.⁶ The City already has a park deficit valued at \$1 billion. These figures don't include regional parks.

Myth: Population growth isn't a problem; we just have to plan for it.

Truth: Some resources are finite and can't be expanded by money. Beaches and mountain parks are an example of fixed resources whose availability to existing residents decreases with each year's wave of population increase.

Truth: The ultimate carrying capacity is the ability of the regional ecosystem to support life. The report ignores all the current scientific evidence about the "ecological footprint" of an urban area, and the natural limits of regional ecosystems to absorb human impacts.

6. CARRYING CAPACITY --- HOW TO ENFORCE

Myth: If we could calculate carrying capacity, we couldn't control our ability to live within it.

Truth: The report makes a very weak case that we are helpless to meet the goal of living within natural limits. Just two policies by themselves would moderate our growth rate and speed up our transition toward population stability: Adequate impact fees and aggressive open space acquisition.

⁵ Planned Parenthood. www.planned.org/newsroom/library/family_planning/title_X.html

⁶ City of San Diego General Plan. "Citywide there should be approximately 20 acres of urban recreational land for each 1,000 residents."

7. HOUSING RESTRICTIONS, PRICE INCREASES & HOUSEHOLD SIZE

Myth: Changes in household size from 1980 to 2000 were due to price increases because of a “housing shortfall”. This change in household size can be used to predict large increases in housing prices if we build fewer homes than the forecast demand.

Truth: *This part of the report dealing with household size and price increases is so fallacious that it calls into question the validity of the whole report. It also casts doubt on SANDAG’s claim that all jurisdictions in the region should increase their general plan capacities to prevent future shortfalls.*

On page 26, the report attempts to show that future restrictions on housing supply would cause large increases in home prices. The authors first propose that San Diegans should take the number of persons per household in 1980 and freeze this level as their goal and inalienable right over the next 20 years. Any increase in household size is assumed to be caused by price increases due to a “shortfall in housing units”. The resulting “elasticity” is meaningless. Nevertheless, the “elasticity” derived from the fictitious “shortfall” is then used to project housing prices from 2000 to 2020.

What’s wrong: There are three obvious fallacies with the assumptions and the use of the model:

- a. All of the past increase in our region’s household size was attributed to price.
- b. It was assumed that people’s tendency to increase household size in the past would continue in identical fashion into the future.
- c. The model was misused by forcing the per capita income to remain the same in both scenarios, that is, with and without housing restrictions.

Why it’s wrong:

- a. It is absurd to attribute all of the changes in our region’s household size over the last 20 years to price. We know that our region had a disproportionate increase in foreign immigrants, with their larger family sizes, and that significant numbers of baby boomers raised children, which also increased average family size.

Richard T. Carson, the UCSD economist, recently completed a study based on all counties in the U.S. and found that family size is the major determinant of the number of people per household. The percent of population age 0-17 living in a county was four times more important than home price in predicting household size. ***He concluded that a policy of restricting housing starts would be 3 ½ times more effective in slowing population growth than the SANDAG model showed. (92% effective vs. 25% effective)*** ⁷

⁷ Carson, Richard T. Letter to SANDAG, April 10, 2001.

b. It's unlikely that household size will continue to increase in a linear fashion, extrapolated from the 1980-2000 period to the 2000-2020 period. As with most trends, moderating influences can be expected to arise, and any price-related increase in household size is likely to take place to a lesser extent in the future.

c. Table 1 depicts that Per Capita Income remains the same while Avg. Home Price goes up by \$73,100. Economic realities tell us that this is impossible, since employers are forced to pay higher wages when home prices increase. A second letter from Dr. Carson explains this serious error. ⁸

In the end, this section of the report vastly overstates the impact that housing restrictions would have on prices. Furthermore, it does not address how much of the price increase would be offset by higher wages. Lastly, it does not address the "amenity affect" in which part or all of future housing price increases might reflect an improved quality of life resulting from slower rates of growth (buyers and renters would get something valuable for their money). ⁹

To summarize, there's no evidence that the increase in household size between 1980 and 2000 was dictated by a regional shortage in the supply of housing or by price increases alone. There is no evidence that building fewer homes than called for in SANDAG forecasts would dramatically increase prices, or cause widespread increases in the number of persons per household.

8. ARBITRARY LIMITS vs. FACILITY REQUIREMENTS & HIGHER FEES

The Friends of San Diego does not promote housing caps as a regional policy, for reasons different from the fallacious ones in this report. The importance of the "restricted housing" discussion is this:

If our region adopts effective Adequate Public Facilities Ordinances, extensive open space acquisition, and adequate impact fees and business taxes, we will have no need for housing caps. Such policies may or may not reduce the number of homes built. If they did reduce housing starts, we need not fear that population growth will continue unabated, with large numbers of people "doubling up".

To the extent that housing prices might rise somewhat due to effective growth policies, this would simply reflect the true cost of paying for growth, and the true cost of maintaining quality of life.

⁸ Carson, Richard T. Letter to SANDAG, March 27, 2001.

⁹ Carson, Richard T. et al. *On the Theory of Growth Controls*, Journal of Urban Economics, Volume 32, No. 3, November 1992.

9. HOUSING RESTRICTIONS PLUS NON-RESIDENTIAL RESTRICTIONS.

The report panned housing restrictions by stating that people would still come for jobs. Then it panned commercial/ industrial limitations by stating that people would still come, fitting themselves into workspaces somehow. The report did not address the effectiveness of these two policies together, which could be an interesting study if done well. Boulder, Colorado for example, downzoned some industrial land and purchased other industrial land, judging that this was less expensive than dealing with the resulting costs of continued employment growth.¹⁰

10. IMMIGRATION.

Myth: Local government has no control over immigration policy.

Truth: Our government leaders do get involved in immigration issues. For example, they have petitioned the federal government regarding reimbursement for immigration related legal costs. Similarly, local government can speak up about immigration levels and their impact on California's growth rate and facility requirements.

11. TARGETED JOB CREATION.

Myth: We can reduce population increases by targeting certain industries through public policy.

Truth: This is just another form of boosterism. Tens of thousands more high-tech workers would create the need for more than an equal number of low and middle income workers, with the existing residents picking up most of the costs. The SANDAG report theorizes that we'd get fewer people this way. Candidly the report acknowledges the many limitations of "high value added" job promotion on page 9, last paragraph.

Let's apply some common sense: Picture a room crowded with people. The promoter stands on the sidewalk offering incentives and encouraging certain types of people to come in. Then he tries to convince us that the resulting number of people in the room will be fewer than if he had let people come and go without his help or incentives. We don't buy it.

Isn't it time to stop spending taxpayer funds to promote growth of any type?

12. AFFORDABLE HOUSING

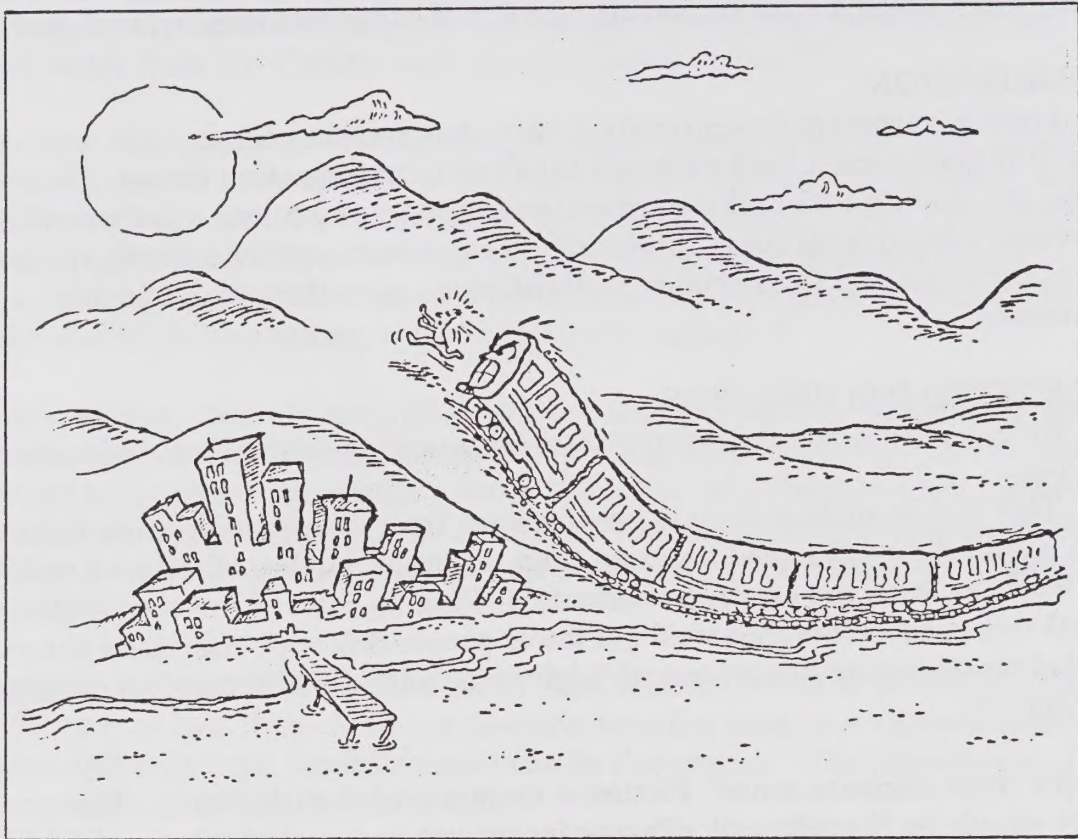
It is evident that in the past, unbridled growth in population has not provided housing that is affordable, based on local wage levels. It seems evident that a future policy of unbridled development will not ease the housing plight of low income residents.

If we are serious about easing housing strains on the most needy segment of the population, we should tackle this directly through inclusionary housing policies, linkage fees, density bonuses, and so on.

¹⁰ Fodor, Eben, *Better Not Bigger*, New Society Publishers, 1999.

Runaway growth hurts the poor more than others. We will never build our way out of low income housing shortages.

We will never outrun the Growth Train!

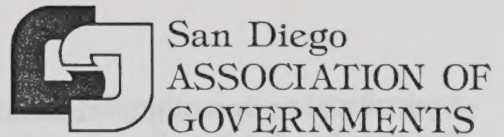


PART 4. NEW VISION NEEDED

The Slow Growth Policies Evaluation offers little of value, except to create an obvious need for objective inquiries.

The current growth-without-end approach will lead us to a Los Angeles style megalopolis, albeit one that may be better planned and that gobbles up rural open space at a slower rate.

A new vision is needed! (to be continued)



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April 24, 2001

Mr. Tom Mullaney
Friends of San Diego
4019 Goldfinch Street, #230
San Diego, CA 92103

Dear Mr. Mullaney:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of the SANDAG Board, the next step may be to address these and other related issues.

In your letter, you reference Richard Carson a number of times. We have addressed his comments in a separate letter, which we have attached for your information.

With regard to your comments on this study:

Part 1

- The report does not cover five promising growth policies: impact fees; adequate public facilities ordinances; agricultural preservation; urban limit lines; and open space and habitat acquisition.

Response: We have addressed development impact fees and adequate public facilities ordinances in Section III of the study. The report distills all local growth slowing policies into three categories. Development impact fees and adequate public facilities ordinances are considered limits on housing or the economy, depending on how they are applied (residential or non-residential). Essentially, these policies are designed to increase the costs of development such that development "pays for itself." Increasing costs reduces the amount of new construction, which is an indirect way to reduce development. We simulate policies designed to reduce housing development and employment space in Section II.

Agricultural preservation, urban limit lines, and open space and habitat acquisition are policies designed to allocate where growth occurs. Their purpose is to preserve certain types of designated land, not slow population growth. In this respect, they are similar to urban growth boundaries. A discussion on growth boundaries is included in Section III of the study. Growth boundaries have not shown to be effective at slowing population growth. In fact, areas that have implemented urban limit lines and growth boundaries are among the fastest growing areas in the nation. For example, the Portland-Salem metropolitan area grew by 472,000 people between 1990 and 2000 (23.6%). The Denver-Boulder-Greeley metropolitan area grew by 601,000 people between 1990 and 2000 (30.4%). The U.S. grew by 13.2 percent over this same time period.

- Impact fees or business taxes would probably slow growth.

Response: Our treatment of impact fees is explained above. An example of the regional impacts of increasing taxes is included in Section II of the study. A tax has the potential to slow growth because it increases the cost of doing business. However, the ability to slow population growth depends largely on the size of the tax and how the tax revenue is used. If the tax benefits the region, the growth-slowing ability of the tax is offset.

Part 2

Thank you for your support of the smart growth concepts embodied in REGION2020. Our study concludes that, because the region will continue to grow, we must adequately plan for it, and smart growth principles will guide these planning decisions. REGION2020 is a "bottom-up" process and does not force compliance. The decision on how to respond to the strategy is up to each individual jurisdiction.

Part 3

Critique 1: The report incorrectly states that 60 percent of our projected growth is due to natural increase. Because much of the natural increase is due to new migrants, these are not "our kids."

Response: The forecast does not differentiate between children of current or future residents. The 60 percent figure reflects the percentage of population growth due to natural increase from 1995 to 2020. This number is derived from the "residual method" of population accounting, in which net migration is equal to population change minus births plus deaths.

We agree that some of the region's natural increase is due to net migration that occurs during each period, so the actual contribution of migration to population increase is higher than the residual method suggests. As described in Section IV, the total contribution of future migrants to 2000 to 2020 population growth is 47 percent. Net migration accounts for 35 percent of population growth and the natural increase associated with the net migration accounts for 12 percent.

Critique 2: The 2000 Census shows less growth than expected, calling into doubt SANDAG's forecast. Because the future is likely to be different than the past, it is doubtful that SANDAG's 2020 forecast (based on historical data and relationships) will be accurate. The region is nearly out of vacant developable land; the forecast incorrectly assumes the region can and will accommodate all forecast population.

Response: As a point of clarification, the 2000 population estimate for the San Diego region is from the California Department of Finance (DOF), not SANDAG. SANDAG uses DOF's estimates because they have been accurate in the past, and are designated by the state legislature as the official source of data for planning and budgeting.

The slower growth rate of the 1990s had more to do with the severity of the recession than with any dramatic, permanent slowing of our growth rate. The first half of the 1990s saw huge amounts of people out-migrating from the region in search of jobs. In fact, without foreign immigration and a small amount of natural increase, the region would have actually lost population in those years. Things changed considerably in the second half of the decade, and for the last five years we have continued growing at a rate higher than the nation's.

The future is always different than the past, and the region is different now than it was in the early 1970s when SANDAG's first forecast was released. Our long-term population forecasts have proven very accurate. However, they are not intended to capture short-term fluctuations. For example, SANDAG's Series 7 Forecast, released in 1987, was about five percent lower than the 1990 census figure, but only one percent lower than the 2000 census count. We agree that growth in California and the region is slowing, and the 2020 Forecast shows our growth rate decreasing over time. The 2000 to 2020 forecast of 1.4 percent average annual growth is less than the 2.1 percent average annual growth of the 20-year period between 1980 and 2000.

Our simulations show that, even with the current supply of vacant developable land, under existing planned densities we can accommodate all of the population projected in 2020 with modest increases in household size and commuting into the region. Our earlier research, documented in the Land Use Alternatives report, showed that modest increases in densities on vacant developable land (from 3.7 units per acre to 4.9 units per acre) could accommodate the projected growth through 2020 without the negative impacts of overcrowding, higher home prices, and interregional commuting that occur if housing unit growth is restricted. One final point is that growth also occurs on developed land through redevelopment and infilling, as is clearly evident in many areas of the region, most notably downtown San Diego.

Critique 3: The San Diego region is a well-defined region capable of controlling its own destiny. Growth controls enacted at the regional level would be effective. There are some success stories for regions limiting growth, cities and counties from San Mateo County in the north to Ventura County in the south have effectively turned off the growth tap.

Response: A policy designed to slow growth in the San Diego region's political boundary will likely encourage population growth in neighboring communities and increase persons per household, offsetting the impact of a growth slowing policy. The region cannot stop people

from commuting here for work. In addition, the region has no control over land use decisions made in surrounding counties.

The central coast counties between San Mateo and Ventura have not stopped population growth. Growth in each of the counties along the central coast ranged from 8 to 13 percent between 1990 and 2000, equivalent to or slightly less than the 13 percent growth statewide.

Critique 4: Local government has some control over the number of births in the region, and can actively reduce fertility through family planning and education programs.

Response: Getting involved with family planning issues is not the same as having control over fertility rates. While local family planning policies may be able to reduce fertility rates for some existing residents, they have no control over national and international fertility rates. Because there is a large amount of movement into and out of the region every year, and because it is not a policy option to limit the number of children a couple can have, it will be difficult for local family planning policies to significantly reduce population growth in the region. We have included additional discussion of this topic in Section II of the study.

Critiques 5 and 6: The carrying capacity concept is valid, and the study's conclusion that the region cannot enforce an ultimate carrying capacity is weak.

Response: The study is intended to evaluate the ability of local public policy to slow growth and concludes that, even if the region were to set a population carrying capacity, it could not be enforced. However, the study does not evaluate the merit of the carrying capacity concept, or attempt to set one. The conclusions of this study do not prevent the region from continuing the discussion of carrying capacity.

Critique 7: Changes in household size between 1980 and 2000 were not due to price increases related to a housing shortfall. It is more likely that family size, changing preferences, demographic change, and higher prices all contributed to a higher household size. Increases in household size are likely to be resisted. Richard Carson, a UCSD economist, claims that the number of children up to age 17 is the major determinant of household size.

Response: We have expanded the discussion on housing restrictions in Section II. Home prices increase when demand for housing exceeds supply. A shortage in housing does not have to be the result of a policy designed to restrict units. In the State of California, there are currently fewer housing units available than demanded by the population. This is partly the result of current state fiscal policy that discourages the production of housing units. For more information, refer to SANDAG's 1999 publication "Achieving Fiscal Reform in California." Higher home prices also cause higher household sizes, and encourage people to locate in lower priced areas, such as Southwestern Riverside County.

We believe that the household size assumption is correct. The regional household size increase between 1980 to 2000 was due in part to a shortage of supply compared to demand. The assumption is based on the finding that factors other than demographics cause household size to increase. More specifically, household size in the U.S. fell between 1980 and 2000. Controlling

for demographic factors (age, sex, and ethnicity), we would expect household size in the San Diego region to decrease over the same time period. It did not. Also, as noted in Richard Carson's analysis, a major determinant of household size is the population under age 17. The share of the population 17 and under in the region was the same in 1980 and 2000 (25.7 percent in 2000 and 25.6 percent in 1980). We conclude that housing supply was less than demand. This caused housing prices and household size to increase.

In our baseline forecast, household size does decrease between 2000 and 2020. This decrease assumes enough housing units are built to meet the demand for housing. Under the policy simulation, supply is restricted, causing household size to increase. The simulation uses the household size increase between 1980 to 2000 as the upper limit for the adjustment. It does not say that household size will increase the same amount.

Because our current and forecast household size is low relative to other southern California counties, the increase in household size under the policy simulations results in an average household size comparable to or below that currently seen in Orange, Imperial, Los Angeles, Riverside, Ventura, and San Bernardino Counties.

In our simulation and in the baseline forecast, real per capita income increases by 16 percent between 2000 and 2020. In the simulation of a policy restricting housing units, inflation-adjusted home prices increase by 39 percent. Housing price increases that outpace increases in income are not unprecedented. For example, between 1970 and 1990, inflation adjusted home prices in the San Diego region increased 115 percent, while real per capita income increased only 13 percent. Housing affordability in the San Diego region is low relative to other areas. This signifies that fewer people can afford to buy a home in this region than people making comparable incomes elsewhere. Residents of the San Diego region contribute a greater proportion of their income to housing.

Critique 9: The study should look at whether a combination of housing and economic restrictions would slow population growth.

Response: In the course of our research, we evaluated combinations of growth slowing policies, which also were shown to be ineffective at slowing growth while not minimizing any of the adverse impacts associated with the individual policy simulations.

Critique 10: The study's claim that local government has little control over immigration policy is a myth. Our government leaders do get involved in immigration issues.

Response: Getting involved with immigration is not the same as having control over immigration, and local public policy has no control over international migration. Immigration policy is determined and enforced by the federal government. Furthermore, the regional impact of the federal government limiting international migration is unclear. First, domestic in-migration may increase to meet the local demand for labor no longer filled by international migration. Second, the region's share of the nation's international migration might change. Additional discussion on immigration has been included in Section II.

Critique 11: The region cannot reduce population increases by targeting certain industries through public policy.

Response: We agree that it will be difficult for the region to meet the challenges presented by this strategy, as explained in Section II of the study. The study does not claim that this type of policy would be effective at significantly reducing population, and the population reduction under this policy is relatively small (87,000 people). Less population than the baseline forecast is a possible outcome, but more population is also possible. The rationale behind this policy is included in Section II.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/cd

Attachment

SANDAG Representatives,

I am writing in response to a study conducted by staff of the San Diego Association of Governments. Titled: Evaluation of Slow Growth Policies in the San Diego Region, this document is limited in scope, and fails to support its findings with documentation. On page four of the Executive Summary is the statement

“Apparently, a finite carrying capacity is only as rigid as current technology and tolerance levels of the population.”

Yet nowhere in the ensuing document does it mention how they came to that conclusion or whether the public tolerance level had already been met. As for technology the report fails to address the limits of infrastructure as it relates to sewer and solid waste, It does mention imported water yet fails to address currently availability issues and the long term water forecast. The summary also includes the statement:

“While innovation is not guaranteed, there is no way to determine the region’s relative ability to accommodate a given number of people in the future...”

Once again the summary fails to back up this statement with any documentation. Nowhere does it mention any consideration of biological limitations in regards to determining ability to accommodate growth. Referencing the acknowledgements of those responsible with the current draft of the Growth Policies Evaluation it was clear no biologists, environmentalists or agriculturists where at any time consulted. Only those directly involved with economic forecasting were given consideration in the creation of this document.

I suggest that this “Evaluation of Slow Growth Policies in the San Diego Region” is incomplete, as it is lacking an evaluation of the environmental factors as they relate increasing human populations and a decreasing pool of biological diversity. Until of biological inventory is done including a 30 year forecast regarding water resources and solid waste management please refrain from accepting this report. I also request that you convene a panel of biologist, ecologists, and environmental representatives to evaluation the biological limitations to economic prosperity in an overburdened region. If growth policies were connected to environmental sustainability, a carry capacity could be set. Such knowledge would help slow growth when supported by regional policy.

Robert T. Nanninga / Chair – Zero Population Growth/San Diego Chapter



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April 24, 2001

Robert Nanninga
Zero Population Growth, San Diego Chapter
1928 Leucadia Boulevard
Encinitas, CA 92024

Dear Mr. Nanninga:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

This study had a relatively narrow focus: to determine if public policies can stop or slow growth. You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of SANDAG's Board, the next step may be to address these and other related issues.

With regards to your comment on carrying capacity, the study is intended to evaluate the ability of local public policy to slow growth and concludes that even if the region were to set a carrying capacity, it could not be enforced. The study makes no judgment on whether the region should attempt to determine its carrying capacity. Such a study could provide additional insights to regional growth issues. However, establishing a population carrying capacity for the region would not change the basic findings or conclusions of this study.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk

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April 13, 2001

VIA FACSIMILE TO (619) 595-5305
AND FIRST CLASS MAIL

Mr. Paul Kavanaugh
San Diego Association of Governments
401 B Street, Suite 800
San Diego, California 92101

Re: *"Evaluation of Slow Growth Policies of the San Diego Region"*

Dear Mr. Kavanaugh:

Our law firm specializes in land use and environmental law and has been involved with a number of growth management initiative measures in the Southern California area. We have been asked to review the March 21, 2000 draft report entitled "Evaluation of Slow Growth Policies in the San Diego Region."

The "net" result seems to be an endorsement by SANDAG staff to continue to fuel job growth in the region. We believe there are a number of issues which should have been more fully analyzed before reaching the conclusions and recommendations that you have put forward.

Initially, we note a common theme in your report to the effect that individual local government agencies cannot deal effectively with regional growth issues. We agree with this observation, but then ask how you would propose to obtain the cooperation of local governments for a meaningful regional approach to growth management.

The citizens of San Diego County instinctively know that we cannot continue to grow in this area and preserve our quality of life without fundamental changes in how we grow. To convince the citizens, as well as their elected political leaders, that their communities need to densify or somehow give up control over land use decisions to a regional body, you must have a growth management plan that people will "buy into."

There must be in place a specific, comprehensive and funded plan for addressing our current infrastructure needs and our prospective infrastructure needs. This step alone would begin to build the requisite confidence with the average voter and with their elected leaders.

Until such a plan is in place, no government entity in this region should be continuing to subsidize and fuel job growth with the expenditure of public funds or by giving project applicants tax or mitigation breaks.

Your report should include, among other things, a detailed examination of all the direct and indirect subsidies of job growth that come from public funds. This would include an examination of direct financial support, starting with city contributions to the local chamber of commerce and extending to budgets for economic development agencies.

A huge area of indirect government subsidies includes local government not requiring full mitigation for new development projects. For example, not requiring a project applicant to pay for obviously called for road improvements is a very significant subsidy.

Without a full considered analysis of how governments are actively promoting job growth, your report is flatly incomplete.

We believe that the first step in meaningful growth management for the region is for all government agencies to adopt "growth neutral" policies and practices when it comes to the expenditure of public funds, *i.e.*, end all government subsidies for job growth.

We also heartily endorse your conclusion that fiscalization of land does indeed need to be eliminated. In addition, we have an ongoing situation in this region (and throughout California) of local governments being unable to obtain impact fees sufficient to cover the regional impacts of new development. There is a compelling need to look at regional impact fees and methods of collecting the same so that regional infrastructure can be brought up to par and maintained as the area grows. Functionally, every time a project is approved at the local level without full mitigation of its regional impacts (including traffic, air quality, courts, etc.) then the local government is subsidizing regional growth.

What are your growth predictions for the region if we eliminate all growth subsidies from local governments?

With respect to your high value/low value jobs analysis, we note with interest your comparison of electronic industry with visitor/tourism industry. The report should look at the fact that, if the region continues to grow in a "business-as-usual" fashion, San Diego will become less and

less attractive as a tourist destination and that, in and of itself, will reduce the creation of "low value" jobs. How will this affect your growth predictions?

With respect to business fees and taxes, the report should look at the effects of potential phased-in business tax increases for new businesses in the county. San Diego County, as a whole, is far below average in terms of business taxes and this, in and of itself, is a major growth subsidy affecting our region.

A responsible economic study should look carefully at how business taxes and fees can be phased in over time to reduce the incentives for new businesses to relocate to San Diego County.

The report also should look at the regional labor force as it expands and contracts in economic booms and busts. What, for example, are steps that could be taken during interim periods of high economic growth versus interim periods of low economic growth that would support a long-term managed growth strategy?

On the issue of what other communities have tried to do with respect to managed growth, we believe the tone of your report is far too negative. There have been some significant successes in the Portland area and other communities and, as a region, San Diego should be looking ahead to build upon those successes and enthusiastically look at new and innovative solutions to managing growth.

Is there any other community/region that has adopted fully "growth neutral" policies with respect to government subsidies of growth? If not, then why can't San Diego be the first to try it? Clearly, given the existing public opinion and the long-term demographics of San Diego County, this is a region that is politically prepared to say that, for starters, we are no longer going to subsidize growth with taxpayers' dollars.

Major stakeholders in the growth debate include businesses that are referred to by economists as "primary employers." These include high-tech and biotech companies, whose ability to compete and survive economically is not primarily dependent upon their sales to San Diego residents.

Any meaningful study regarding growth and growth control needs to include very detailed consideration of the needs of "primary employers" in this area. Certainly, for example, they do not want the cost of office space to go up and therefore it would seem that they do not need taxpayers' dollars being used to bring more and more competitors into the area.

On the subject of housing needs and growth, the report should acknowledge that housing for low income families will not be built by a free marketplace. It is absolutely essential that elected officials recognize that, until there is a comprehensive program of public support for the building of low income housing, there will continue to be a low income housing crisis.

The report should also recognize that prices for middle income homes will continue to be high as long as this area remains a desirable area to live. This is a fundamental economic fact and the public should not be misled with suggestions that housing prices will somehow be drastically reduced if we increase land densities in urban areas all over the county.

In this regard, the building industry continues to favor building high-end homes because it can make maximum profits. Hence, increasing densities in the urban areas does not mean that the industry will automatically flock to building condominiums.

In closing, we would note that SANDAG staff and the elected officials in this county need to pay close attention to the basic instincts of the voters. Those instincts tell them there is a better way to deal with growth in this region. Certainly the old practices have been a complete failure.

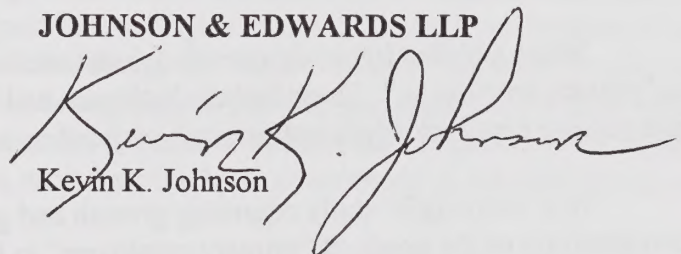
The popularity of growth management initiatives at the local level is a result of this fundamental, basic instinct and growing frustrations with the inability of government, be it local, regional or state, to deal with the ongoing deterioration of our quality of life.

Rather than being wholly negative about the efforts of citizens and local communities to stand up for fundamental principles about their quality of life, the efforts and energies of these citizens should be looked upon by SANDAG as a step towards a serious, and hopefully more enlightened, look at how to deal with growth issues.

Thank you for the opportunity to comment on your draft report.

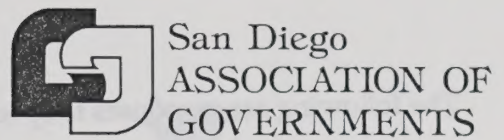
Very truly yours,

JOHNSON & EDWARDS LLP



Kevin K. Johnson

KKJ:kmm



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April 24, 2001

Kevin Johnson
Johnson and Edwards, LLP
402 West Broadway, Suite 1140
San Diego, CA 92101-8513

Dear Mr. Johnson:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, affordable housing, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of the SANDAG Board, the next step may be to address these and other related issues.

We agree with many of your comments, including the importance of an adequate regional growth management strategy, the need for affordable housing, and the need for adequate revenues to fund infrastructure. We also agree that some government policies either directly or indirectly promote job growth. SANDAG's 1987 study, "Causes of Growth and Possible Control Measures in the San Diego region," described the potential impacts of eliminating growth promotion policies in the region. The exact degree to which these policies and programs contribute to the region's population growth was not determined. However, the report claims that they bolster the region's major employment sectors and represent a major public investment in economic growth. According to the report, eliminating or reducing these policies has the potential to slow population growth in the region. However, the reduction in population comes at the cost of a series of adverse economic impacts. The region chose not to eliminate these policies, and public support for them remains strong.

SANDAG's previous studies on growth slowing policies also simulated policies that were unlikely to be adopted in the region. The purpose of these simulations was to illustrate the degree of policy implementation necessary to influence population growth. By enacting the most severe restrictions these studies showed that it was possible to slow population growth. However, these policies were dismissed due to their negative impacts and difficulty of implementation. This study explores more realistic policies that could be adopted, and evaluates their growth-slowing potential. This approach was supported by our panel of experts.

The following are responses to specific comments in your letter:

- Comment: A common theme in your report is that individual local government agencies cannot deal effectively with regional growth issues.

Response: Our study does not claim that local government is unable to deal with growth issues. The conclusion of the study is that local public policy cannot stop or slow growth. There are a number of things local government can do to deal with growth. We are not questioning local government's decision-making ability; our study is intended to help make decisions.

- Comment: Portland has been successful at managing growth.

Response: Portland has a growth management strategy developed around an urban growth boundary. Our study focuses on policies designed to slow growth, not manage it. The difference between growth management and growth slowing approaches is described in Section III of the study. Growth boundaries are not effective at slowing population growth. In fact, areas that have implemented urban limit lines and growth boundaries are among the fastest growing areas in the nation. For example, the Portland-Salem metropolitan area grew by 472,000 people between 1990 and 2000 (23.6%). The Denver-Boulder-Greeley metropolitan area grew by 601,000 people between 1990 and 2000 (30.4%).

SANDAG strongly supports growth management. Our report concludes that because public policies are ineffective in slowing growth, a comprehensive growth management strategy is critical to the region's future.

We appreciate your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk

ENDANGERED HABITATS LEAGUE

Dedicated to Ecosystem Protection and Improved Land Use Planning

Dan Silver • Coordinator
PMB 592
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Los Angeles, CA 90069-4267
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April 15, 2001

Ramona Fannila Chair, and
SANDAG Board of Directors
401 B Street, Suite 800
San Diego, CA 92101

Subject: Growth Policies Study Update

Dear Ms. Fannila and Board Members,

The Endangered Habitats League is a regional conservation organization dedicated to ecosystem protection, improved land use planning, and collaborative conflict resolution. Among other activities, we sit on the SANDAG Regional Transportation Plan CAC, Regional Government Efficiency Commission Land Use/MSCP subcommittee, Riverside County Integrated Plan, County of San Diego General Plan 20/20 Update, and City of San Diego Strategic Plan Update.

While we have limited time with which to formulate extensive comments on the Growth Policies Study, we would like to offer our voice in support of many of the ideas advanced by the community and environmental organizations that have participated as members of the Citizen Review Panel. Specifically we would like to offer our perspective on the concept of "carrying capacity", and offer some growth management principles for your consideration.

It seems evident that in the context of land use, the concept of carrying capacity is linked to the concept of *quality of life*, and that there are usually both objective and subjective ways to measure these concepts. One could say for example, that the carrying capacity of a road has been exceeded if vehicles are unable to transport people to a destination in a reasonable timeframe. There is both a quantifiable (Level of Service) as well as a more subjective common understanding of "reasonable timeframe". One doesn't need to a LOS report to validate the frustration of gridlock. You know it when you are in it. There is a common understanding of the quality of the experience. Other examples reflect the linkage as well. Blocked and overflowing sewers, inadequate recreation facilities closed

libraries, police and fire response times etc. As in our personal lives, we know when things are working and we know when they are not.

Additionally, because of our level of technological sophistication, we can measure and quantify the "curve" for any issue and position ourselves on it. And as the curve defines a regional need, we can measure trends and identify what is needed just to "catch up". Most would argue that the regional trends are not reflecting an increase in the quality of life.

There is also a "common sense", or common value system, that measures quality of life. Examples of regional quality of life values include: a transportation system that actually facilitates mobility, clean air and unpolluted water, communities with a sense of place and security, open spaces integrated with the natural world, and infrastructure (from parks and libraries to energy, water, and sewer systems) equal to the demands placed upon it.

These principles linking land use, carrying capacity, and quality of life hold true for communities, jurisdictions, and the region as a whole. If we think not, we must ask ourselves where the break is. Is there a jurisdiction that is independent from regional impacts? Are there regional impacts that are unaffected by individual jurisdictional decisions? We are in this together, and we will sink or swim together.

With this reasoning as a basis, we would like to offer the following principles relating managed growth and quality of life:

Principle: Without a quality of life vision, strategy, and standards we are lost.
Vision by committee cannot work until we have focused on developing a personal vision first. Each elected official should define a personal quality of life vision and make it public. The vision must be specific enough to allow the measurement of progress. The vision must drive action. Measurable standards are the guideposts. Geographically define rural and urban. What is the urban vision? What is the rural vision?

Principle: There is no free lunch.
New taxes are necessary to pay for the existing infrastructure deficit. New impact fees are necessary to cover the cost of mitigating impacts from new development. There must be some form of public/private subsidy to balance affordable housing needs.

Principle: Everything is linked.
Land use plans must be comprehensive and linked in a regional context. Regional infrastructure is linked practically, politically and economically. Transportation, open space, water quality, housing, jobs, public facilities, and public safety are all fundamental components of regional infrastructure.

Principle: Passing the buck is irresponsible.

Do not expand (and effectively increase deficit) before you have addressed existing infrastructure deficit. With a realistic understanding, unbreakable linkage, and strategic approach, it is possible to address infrastructure deficits and new planning alternatives concurrently (e.g. transit and congestion relief). Urban sprawl would be controlled if this commitment were made.

Principle: Ask good questions.

We should ask relevant questions of ourselves such as:

Why are we behind the curve?

What will the region look/feel like in 100 years?

What is my job?

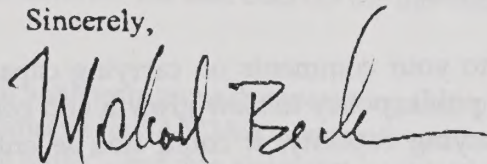
Imagine a place that is or was special to you. Why is it special?

How, specifically, can I advance the vision?

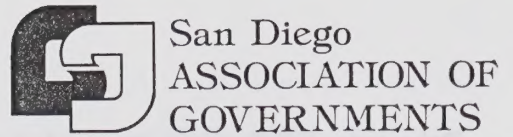
The Endangered Habitats League is committed to the vision of a balanced community in harmony with the natural world. We are likewise committed to investing the work necessary to make it a reality (an appropriate addition to the list of principles: Action matters).

We appreciate the opportunity to offer our comments on this most important topic.

Sincerely,



Michael Beck
San Diego Director



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www.sandag.org

April 23, 2001

Michael Beck
Endangered Habitats League
560 La Cresta Blvd.
Crest, CA 92021

Dear Mr. Beck:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region."

This study had a relatively narrow focus: to determine if public policies can stop or slow growth. You had a number of comments suggesting additional research or areas of emphasis for this study. Quality of life, the health of the environment, and other issues are vital to the region and are part of SANDAG's work programs. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth. Subject to the direction of SANDAG's Board, the next step may be to address these and other related issues.

With regards to your comments on carrying capacity, the study is intended to evaluate the ability of local public policy to slow growth and concludes that even if the region were to set a population carrying capacity, it could not be enforced. The study makes no judgment on whether the region should attempt to determine its carrying capacity. Such a study could provide additional insights to regional growth issues. However, establishing a carrying capacity for the region would not change the basic findings or conclusions of this study.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/jdk

TO: SANDAG Board of Directors

Dear elected representatives,

Thanks for the opportunity to comment on the latest "Growth Policies Study."

I have a great concern as to whether the conclusions are based upon real data and robust modeling assumptions. But mainly, I would like to focus in on several erroneous arguments that are used to dismiss approaches without any data cited whatsoever. This includes most prominently the comments with respect to policies and programs that could reduce birth rates.

Their key arguments against any policies are:

"certain national policies tend to promote fertility."

and

"reductions in unwanted births will be increasingly difficult to achieve."

Both these arguments are not deployed against other policies. For instance, national (as well as state) policies promote a wide variety of policies for and against local concerns - such as fiscal distribution. Instead of noting that officials could lobby to change those policies - as they recommend with fiscal reform - here they leap to the overly biased conclusion that nothing can be done.

As for being difficult to achieve, I can think of nothing that SANDAG is attempting to do that is not "difficult to achieve." This is not a neutral standard and says nothing about whether the policy is important. There are important public goals - such as pollution reduction and health improvements - all of which are "difficult to achieve" - but staff does not use this excuse to dismiss them when promoting those.

They provide no statistical evidence that their arguments prove that increasing such policies would be ineffective. It is intellectually inconsistent for SANDAG to promote consistently as they do that "the largest factor in growth is natural births" - and then claim that no reduction in birth rates would matter. Then why do the local natural births matter? Their rationale that reducing birth rates doesn't matter because too many of those individuals might move out and be replaced by others with higher birth rates - is put forth without any analysis to back it up. Furthermore, one could easily see that others moving in could then become advantaged of better regional programs and reduce their birth rates as well. This is an example of bias influencing conclusions - not providing neutral analysis of what could be achieved.

Some brief cites about family planning are: A 1995 report on unintended pregnancy by the Institute of Medicine/National Academy of Sciences noted with concern the increasing number of births from unintended pregnancies in the early 1990s and pointed to the serious public health consequences - especially for low-income women and adolescents. Each public dollar spent to provide family planning services saves an estimated \$3 that would otherwise be spent in Medicaid costs. Publicly funded family planning programs enjoy overwhelming public support. One 1997 report stated that 76% of Americans support access to family planning while 74% favor increase public funding for family planning services to reduce the number of unintended pregnancies. Another study that measured the cost on contraceptive methods compared to the cost of unintended pregnancies found that the total savings to the health care system to fall between \$9,000 to \$14,000 per woman over five years.

Overall, this study does nothing to neutrally evaluate the positive impacts of reducing growth.

It also leaps to conclusions that reducing growth would have speculative negative impacts - such as increasing impacts upon the poor. However, they do not acknowledge that the current system automatically discounts and disadvantages the poor today. If there were less people, there would be less demand for housing and many other factors that could indeed become a benefit to the poor. But this aspect is never analyzed. Instead, they leap to the traditional conclusion that only by population growth can we help the poor. But this has not indeed helped the poor. Poverty and homelessness continues to rise under the current regime.

Finally, in sitting through the citizen review process with staff, they represented that there was no approach that could reasonably expect that our region could reduce its growth even to match the national average.

But the following week - the new census results were released and showed that this indeed was already happening. Not only are SANDAG models not "in synch" with this reality - but staff had absolutely no inkling about it. They are so steeped in their own beliefs about the model that they had not even considered that the real world is already operating differently than those beliefs.

This is of great significance to SANDAG and the region.

I would urge the SANDAG Board to immediately request a review and correction to all modeling assumptions and forecasts and hire staff that can reconcile their view with the data - and not just defend their views. The purpose of modeling is to test and then retest and then adjust - not just do the simplistic task of pushing out lines the direction they are already going. In the corporate world several different scenarios are usually compared so that management has a selection from the different options and is aware of key variables that can change direction and impact costs and opportunities. You can then make more informed choices about risks and opportunities and tradeoffs.

Given the failure of the current SANDAG model to understand a major change in growth in the region, our models need independent reevaluation right away.

Sincerely,
Carolyn Chase
San Diego Earth Times
www.sdearthtimes.com



San Diego
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April 24, 2001

Carolyn Chase
San Diego Earth Times
P.O. Box 99179
San Diego, CA 92169

Dear Ms. Chase:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region." Here are staff's responses:

Comment: The study erroneously dismisses policies that could reduce birth rates based on the difficulty of implementation. The study presents no statistical evidence to support that increasing family planning would be ineffective.

Response: The study does not discount any policies simply because of limitations to implementation. The conclusions are based on our research of current literature and the findings from our simulations. We do not agree that the conclusions are biased and without supporting evidence. We feel the discussion on pages 54 through 58 is both balanced and objective.

The report recognizes that national family planning policies have saved money and are widely supported. The study provides evidence as to why family planning policies would be ineffective at slowing growth locally. Drastically reducing the number of births in the region would slow population growth. However, we believe that the region cannot reduce births to the degree necessary to slow growth. The key piece of statistical evidence presented is that births that are unwanted at the time of conception are only ten percent of total births. Furthermore, pregnancies are unintended for two reasons: a child is not wanted, or a child is not wanted at that time. We conclude that, even if family planning can eliminate all unwanted births, there would be less than a ten percent total reduction in births.

Comment: The study does not neutrally evaluate the positive impacts of reducing growth.

Response: This is true. This study had a relatively narrow focus: to determine if public policies can stop or slow population growth. Although there are benefits associated with slower population growth, this study concludes that local public policies cannot significantly slow growth. Some amount of growth is inevitable, and our primary obligation is to plan for it and manage it responsibly. This study is intended as a starting point for continued public discussion of the issues. We recognize that there are important topics that are not fully addressed, and some of

those are described under Other Topics at the end of the Executive Summary. Subject to the direction of the SANDAG Board, the next step may be to address these issues.

Comment: The study claims that only by population growth can we help the poor.

Response: The study does not claim that population growth helps the poor. We conclude that the burden of policies that restrict housing or the economy will be borne disproportionately by lower income residents. That includes more than just "poor people." It also refers to working, middle class people who would like to purchase a first home in the region.

Comment: The 2000 census showed that the region grew at a rate slower than the nation. SANDAG should review and correct all modeling assumptions and forecasts.

Response: It is true that over that particular ten-year period, 1990 to 2000, the region grew at a rate slower than the nation. However, that has far more to do with the severity of the recession than with any dramatic, permanent slowing of our growth rate. The first half of the 1990s saw huge amounts of people out-migrating from the region in search of jobs. In fact, without foreign immigration and a small amount of natural increase, the region would have actually lost population in those years. Things changed considerably in the second half of the decade, and for the last five years, we have continued growing at a rate higher than the nation's.

Long-range forecasts are not intended to reflect short-term fluctuations. For example, SANDAG's Series 7 Forecast, released in 1987, was about five percent lower than the 1990 census figure, but only one percent lower than the 2000 census count.

Our long-range population forecasts have been accurate. Growth in California and the region is slowing, and the 2020 Forecast shows our growth rate decreasing over time. Total population is only the first of many items to be released from the census. More detailed census data will allow us to analyze trends in fertility, domestic and international migration, household size, and interregional commuting. Future SANDAG forecasts will incorporate Census 2000 data.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/cd

September 25, 2001

Carolyn Chase
San Diego Earth Times
P.O. Box 99179
San Diego, CA 92169

Dear Ms. Chase:

Thank you for submitting your comments on the Draft "Evaluation of Growth Slowing Policies for the San Diego Region." Here are staff's responses:

Comment: The study erroneously dismisses policies that could reduce birth rates based on the difficulty of implementation. The study presents no statistical evidence to support that increasing family planning would be ineffective.

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those are described under Other Topics at the end of the Executive Summary. Subject to the direction of the SANDAG Board, the next step may be to address these issues.

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SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Should you have any questions, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/cd

April 24, 2001

The Honorable Ramona Finella
Chair
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

RE: Evaluation of "Growth Slowing" Policies for the San Diego Region

Dear Ms. Finella:

On behalf of the San Diego Regional Economic Development Corporation, I want to urge the Board to accept distribution of the report, "Growth Policies Study," and to move aggressively in dealing with its conclusions.

EDC believes four issues stand out and are the ones that you should focus on in your discussions of the report.

First, it is clear from the report that efforts to limit the supply of housing are **ineffective in limiting the population increase in the region**. The report makes clear that when housing supplies are constrained and housing prices rise, this is likely to lead to unintended and negative consequences in our region. One response is an increase in persons per housing unit as more related and unrelated persons share the same dwelling unit, resulting in population growth without housing unit growth (and, in our opinion, a potentially reduced quality of life). The report makes clear that San Diego's household size could substantially increase before approaching the level found in other Southern California counties. One problem with accommodating growth in this manner is the difficulty in planning and paying for the necessary improvements in public facilities and services. The problem is that increases in household size are not detectable, making infrastructure planning extremely difficult and can result in dramatic increases in demands placed on public services. The most frequently cited problem occurs in schools. Facilities become overcrowded with new students while the property tax base stays constant. Similar problems are often experienced vis-à-vis parks, libraries, and transportation infrastructure.

Further limiting the already short supply of housing units will lead to higher home prices and encourage people **to move further and further away, and make longer and longer commutes**. As the report points out, more and more residents are likely to move to Temecula and communities further north to take advantage of lower housing prices. EDC believes that most local companies are unlikely to follow, so long as there are compelling business reasons for them to remain and "cluster together" in the San Diego region. The result will be that Interstate 15

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w w w . s a n d i e g o b u s i n e s s . o r g



will become even more congested. Furthermore, it is likely that the residents of our region will be the ones that will pay for the new road improvements that will be required to keep congestion (for both these commuters and remaining residents) at an acceptable level. The region will get a limited amount of the revenue generated by this growth, but we will likely be responsible for providing and funding much of the public infrastructure and services to accommodate long commutes.

The second major point made by the study is **that trying to limit the rate of increase in employment is problematic**. The tools that government has available can influence the mix of jobs created, but local government may have only a limited impact on the overall number of jobs. As the report makes clear, through a combination of growth controls and public investments, it is possible to create a better balance between the relative number of high-paid/high-skill jobs in the economy and the number of jobs created in lower-paid/lower-skilled industries. This policy may have only a marginal effect on the overall population growth of the region, reducing population growth by 8 percent. Critically, this limited reduction in population growth – if it occurs – doesn't materially impact the infrastructure and other needs of the region. Another concern about this policy is whether our labor force could respond to the demands of the new job mix. The change in the mix of jobs requires our future labor force to obtain relatively higher levels of education, job skills, and job training. Although improvements to the labor force and the new mix of job opportunities would raise the relative level of wages, it is not clear that our labor force could accomplish this transition or that we have the resources available to fund the necessary workforce development programs.

Third, the report makes clear that **it is incorrect to draw too many comparisons between San Diego and Santa Barbara**. Santa Barbara has been mentioned in some circles as a community where growth has been successfully "controlled" and which can teach San Diego lessons. But as the report makes clear, the differences between our regions have serious impacts on how growth-control measures would work. San Diego's economy is much larger, much more diversified, with a healthy blend of both newly emerging industries like biotech and wireless communications and mainstays like the military and tourism. It is unlikely, for example, that the military will go elsewhere or that UCSD will halt construction on its sixth college or stop spinning off innovations and ideas that lead to new companies. Similarly, unlike Santa Barbara, our region is home to a major convention center and has a multi-billion dollar visitor industry built on business as well as on leisure travel. Oil drilling off of the Santa Barbara coast also limits the amount of tourism in that region, as Santa Barbara's beaches are much less attractive than San Diego's and this constrains its appeal as a tourist destination. These differences are important because, as the report points out,

The Honorable Ramona Finella

April 24, 2001

Page 3

they limit the options available to San Diego policy makers who are trying to control population growth.

The fourth, and we believe the most fundamental point made in the study, is that **the ultimate result of growth control policies is to increase economic inequality, NOT significantly limit population growth.** The effect of a massive increase in housing prices is to transfer wealth from younger, first-time homebuyers to property owners and landlords. The effect of trying to limit job creation will impact the less affluent residents of this region. EDC believes that the SANDAG board shares our opinion that these are undesirable outcomes and we should not impose policies that produce these results, **especially if there is no benefit to our region's quality of life.**

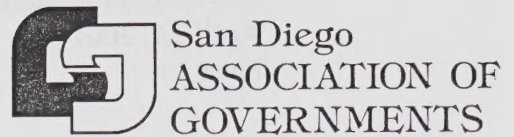
The conclusion of the report is clear. There are serious and negative consequences if we give in to the temptation of thinking that the region can somehow seriously constrain growth below the relatively modest levels predicted in the region's 2020 forecast. Rather, we have to face our growth challenge head-on and start smartly planning for an increase of roughly 1,000,000 new residents, more than 60% who will be born here, and 450,000 new homes by the year 2020. To do otherwise is to pursue policies that erode our quality of life, increase inequality, and decrease our region's long-term economic health, including the revenues to government to fund needed services. I urge the board to both accept the study for distribution and to begin a serious dialogue about how we need to accept the responsibility of planning for the population increase that our region will inevitably experience.

Sincerely,



Julie Meier Wright
President & CEO

Cc: SANDAG Board of Directors



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September 4, 2001

Ms. Julie Meier Wright
San Diego Regional
Economic Development Corporation
401 B Street, Suite 1100
San Diego, CA 92101

Dear Ms. Meier Wright:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. We are pleased that you concur with the findings and conclusions of the study, and we appreciate your comments of support.

A final version of the report is being produced now, and will be presented to the SANDAG Board of Directors at their meeting on September 28, 2001. If you have any questions or further comments, please contact me at any time.

Sincerely,

GARY L. GALLEGOS
Executive Director

GLG/PK/dak

Gary Waayers
11025 Autillo Way
San Diego, CA 92127
858-673-8279

July 1, 2001

Gary Gallegos
Executive Director
SANDAG
401 B Street
San Diego, CA 92101

Mr. Gallegos

I would like to comment on the Draft Report "Evaluation of Slow Growth Policies in the San Diego Region." I have several areas of concern.

1. The concept of a regional carrying capacity was not address in an analytical manner. The report's approach to carrying capacity is to state that there is "no way for local public policies to enforce it" and that a "finite carrying capacity is only as rigid as current technologies and tolerance levels of the population."

No apparent work was done to determine what our current carrying capacity might be with our current technologies or future technologies that could be reasonably expected to provide significant assistance before we exceed carrying capacity.

This study did little to address the tolerance levels of the people, one of the criteria this report used for reaching a carrying capacity. Quality of life is a complex issue. The positive and negative aspects of Growth and Slow Growth on the quality of life must be weighed evenly. This report failed to meet this criteria.

A scientific examination of carrying capacity must be done using reasonable projections on technologies and the tolerance of the people on the impacts to their quality of life. Without one this report should not be consider final.

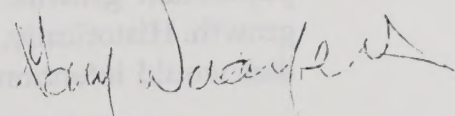
2. The Analysis of Local Slow Growth Polices leaves some questions unanswered.

Each of the policy simulations appears to have been done independently of each other. Was a combined approach tried? Also the policy simulation targeting government funds failed to incorporate the cessation of government funds and policies that are used to support efforts to recruit new businesses to the region.

It is also highly probable that factors such as household size used in the simulations are not in line with current data available through the US Census Bureau.

3. The concept that local governments can do nothing to change the natural rate of growth is faulty. To assume that the natural rate of growth in the San Diego region must be above that of the United States rate is unacceptable. Education programs have been shown to have significant impacts on birth rates in other regions. Local funding for family planning and health clinics also have had significant impacts on birth rates when working in conjunction with other local community programs. Local school districts can expand their educational programs. None of this was mentioned in the study.

The inertia for growth is here. This study does little to change the direction of growth or to weigh the positive and negative aspects of the current Growth polices with a comprehensive policy of Slow Growth. The energy and planning needed to change the direction are complex. Without examining carrying capacity or the positive aspects of reaching a level of sustainability below a maximum carrying capacity this study says its not worth the effort to achieve Slow Growth. Our future depends on the effort we put into the planning. Our grandchildren deserve better. I reject this current study as not worthy of a region as rich and diverse as San Diego.


Gary Waayers

September 7, 2001

Mr. Gary Waayers
11025 Autillo Way
San Diego, CA 92127

Dear Mr. Waayers:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. I would like to address your three comments individually.

First, with respect to carrying capacity, we believe that the study's conclusion that public policies cannot enforce a predetermined population cap is correct. However, a regional carrying capacity analysis could be a helpful tool in monitoring the region's environmental health. For that reason, SANDAG is currently investigating exactly how such a study might be conducted, and, if feasible, we will move forward with one.

As you correctly stated in your letter, quality of life is a complex issue. Therefore, properly designing a meaningful study is a major challenge. One quick example: you mention that "reasonable projections on technologies" should be used in preparing such an analysis. We agree. But when studying the effects of growth and technological change over the next 20 or 30 years, this is a tall order. The full impact of many of the technologies that we routinely employ today, such as cell phones and e-mail, was largely unforeseen 20 years ago. By 2020 or 2030, technologies such as desalinization or fuel cells could fundamentally alter our region's effective carrying capacity.

Next, you asked if we simulated using a combination of policies to slow growth. The answer is yes, we tried several combinations. However, the results were similar to and as ineffective as the individual policies.

The cessation of funds and policies used to recruit new businesses to the region is discussed on pages 74-75 of the draft report. SANDAG's previous growth study (*Causes of Growth and Possible Control Measures in the San Diego Region*, September, 1987) described the potential impacts of eliminating these programs. While doing so may slow growth by some unknown degree, it would be at the cost of a series of adverse economic impacts. Public support for these programs was strong then, and appears to remain that way today.

As the current report states, job growth is the most fundamental driver of population growth. Therefore, reducing job growth could reduce population growth. Historically, however, there has been no willingness to take overt actions that would intentionally hamper the region's economy or its ability to compete

for jobs. It is conceivable that there may come a point at which the region may wish to reconsider at least some growth promotion activities.

The final version of the report, to be presented to the SANDAG Board sometime this fall, will include results of the simulations using the updated household size information from Census 2000. The impact of the new data appears to be fairly minimal, and will not affect the report's basic conclusions.

Finally, with regard to your comments on birth rates, the report recognizes that national family planning policies have saved money and are widely supported. The study provides evidence as to why family planning policies would be ineffective at slowing growth locally. Drastically reducing the number of births in the region would slow population growth. However, we believe that the region cannot reduce births to the degree necessary to slow growth. The key piece of statistical evidence presented is that births that are unwanted at the time of conception are only 10 percent of total births. Furthermore, pregnancies are unintended for two reasons: a child is not wanted, or a child is not wanted at that time. We conclude that even if family planning can eliminate all unwanted births, there would be less than a 10 percent total reduction in births. This is not to say, nor does the report mean to imply, that local family planning programs are not important.

It is also noteworthy that fertility rates in the region are, in fact, declining. This downward trend toward "replacement level" is factored into the 2020 Cities/County Forecast.

We certainly agree with you that our future depends on the effort we put into planning today. The growth study's primary conclusion is that some amount of growth is likely continue in the region, and that in order to maintain our quality of life it must be managed proactively. That is why we are asking the SANDAG Board to approve the final version of the report as a part of the overall REGION2020 growth management strategy.

If you have further comments or questions, please contact my staff or me at any time. Thank you.

Sincerely,

GARY L. GALLEGOS

GLG/PK/dak

Benny Chien, Attorney at Law
2615 Ellentown Road
La Jolla, CA 92037
bchien@ucsd.edu
(858) 450-9325

Gary Gallegos, Executive Director
SANDAG
401 B Street
San Diego CA 92101

June 30, 2001

Re: Growth Policies Report (proposed)

Dear Mr. Gallegos:

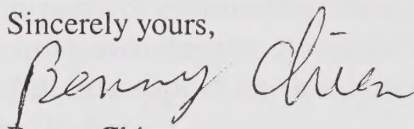
I request the SANDAG Board to reject the draft growth policies report. In spite of the efforts of numerous community groups and environmental groups to incorporate policies as to the benefits of limiting population growth, the report continues to follow obsolete notions that economic well-being has to be dependent upon ever increasing population increase.

The massive infrastructure cost for the tens of thousands new people moving into San Diego county far exceeds the benefit to the existing population and would yield a much higher return if it were invested in improving the job skills and education of our current residents. The taxpayers would get back more for their money by investing the billions now diverted to water pipelines, sewage treatment plants, freeways, jails, courts, and so on into the high schools, community colleges, universities, and advanced research facilities. That is the more efficient way of creating economic wealth. Higher skilled people rather than more people.

The draft report never compares this approach to growth policy to the obsolete method of accommodating endless new people. That old method favors land speculators, real estate developers, brokers, concrete companies, and freeway construction companies, while leaving a wake of traffic congestion, deficient schools, social services, courts, jails, and diminishing quality of life.

Again, please reject the report until it reflects the true needs of the residents of the county.

Sincerely yours,


Benny Chien



San Diego
ASSOCIATION OF
GOVERNMENTS

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September 7, 2001

Dr. Benny Chien
2615 Ellentown Road
La Jolla, CA 92037

Dear Dr. Chien:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. I would like to respond to your comments.

First, it is important to note that this report is not pro-growth. It does not say that growth is good, or that we need to grow in order to prosper. The study concludes that attempts to limit population growth through public policies such as limits on housing would be largely ineffective. However, the report never states or implies that "economic well-being has to be dependent upon ever increasing population increase." In fact, the study draws an almost opposite conclusion: that much of our population growth is the result of our current economic prosperity. Periods of high job growth always result in increased population growth.

We agree with your comments regarding the importance of investing in improving the job skills and education of our residents. These concepts are among the central tenets of the Regional Economic Prosperity Strategy, adopted by the SANDAG Board in 1999. However, we do not see investments in education and investments in other types of infrastructure as an either/or situation. Both are important, and both should be considered as highest priority.

The report concludes that some amount of population growth is likely to continue, and that we need to plan for it and most of all, manage it responsibly. A well-conceived and well-implemented regional growth management strategy will improve all of the quality of life issues you mentioned.

A final version of the report is being produced now, and will be presented to the SANDAG Board of Directors this fall. If you have any questions or further comments, please contact my staff or me at any time.

Sincerely,

GARY L. GALLEGOS
Executive Director

GLG/PK/dak

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, and County of San Diego.

ADVISORY/LIAISON MEMBERS: California Department of Transportation, Metropolitan Transit Development Board, North San Diego County Transit Development Board, U.S. Department of Defense, S.D. Unified Port District, S.D. County Water Authority, and Tijuana/Baja California/Mexico.



SIERRA CLUB, SAN DIEGO CHAPTER

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Mr. Gary Gallegos
San Diego Association of Governments
401 B Street, Suite 800
San Diego, California 92101

July 1, 2001

Re: Evaluation of Growth Slowing Policies

Dear Mr. Gallegos:

We are responding to the draft edition of Evaluation of Growth Slowing Policies for the San Diego Region, which was issued by SANDAG on April 17, 2001.

We cannot support this study and we urge that the SANDAG Board reject it.

While it is a worthy goal to "*maintain our quality of life in the context of continued growth*," as the study concludes, it is flawed to ascertain that we can and should do nothing to reduce the rate of our growth, or limit our growth. There is no evaluation of impacts on our environment and quality of life if our population increases by one million residents, and no evaluation of the impacts if this happens in just 20 years as is predicted. There is no indication that the needed infrastructure could be funded and developed at such a rate and which impacts would not be completely mitigated.

The report states: "*This study also makes no judgment on whether the region should attempt to determine its carrying capacity.*"

We must not allow the "*region*" to determine carrying capacity in some haphazard way, but instead, it is incumbent upon SANDAG to determine the regions carrying capacity. Just as we should not make assumptions about our infrastructure capabilities or limitations, we cannot ignore physical and biological limitations such as local water and food supplies, water and air quality, and biodiversity. The natural limits to human expansion are becoming more obvious at the global, national, and state levels. We should not ignore natural limits in regional planning. If a carrying capacity study of infrastructure and natural resources showed that we are heading for a cliff, would the conclusions continue to insist that we have no brakes?

Recommendations

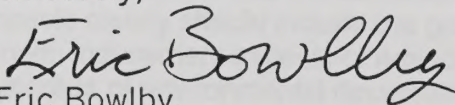
This draft report moves us no closer to understanding important tradeoffs between fast growth and slow growth. We recommend that the SANDAG Board not adopt it.

Mr. Gary Gallegos
July 1, 2001. Page 2

1. **Infrastructure.** First of all, a comprehensive study of infrastructure deficits and future needs should be prepared. SANDAG has already created the framework with the 1993 report on regional infrastructure costs, the 1999 report on transportation infrastructure, and the recent Transit First evaluations. Studies are also needed to address needed infrastructure to resolve our urban runoff and water quality problems. Infrastructure studies should include both capital costs and on-going operating costs.
2. **Carrying Capacity.** Our regional planning must explore the natural limits to growth. All measures of carrying capacity should be evaluated, including wildlife habitat, biodiversity, water, energy, agricultural lands, air quality and open space. Our own wellbeing and our obligation to future generations require us to embrace regional sustainability as our guiding objective.
3. **Quality of Life.** In studying infrastructure and carrying capacity, quality of life standards should be at the core. San Diegans have a right to know if our regional and local planning efforts can be expected to maintain or improve the quality of life, or merely slow down the rate of degradation.
4. **Who pays?** The guiding principle should be that growth pays for itself. SANDAG could borrow a section from the City of San Diego General Plan:
"public facilities reasonably attributable to new development will be provided by new development and not by existing residents"
Newer residents and new businesses that want to share our quality of life can reasonably be expected to pay enough to prevent damaging impacts. This would likely have the important added benefit of slowing the rate we grow.
5. **Equity.** We are concerned that less affluent residents typically are unable to shield themselves from the harmful effects of growth. We urge increased attention to the housing needs for low-income residents who are displaced by redevelopment, to providing quality schools, parks and libraries which serve the general public, and to improved environmental protections for everyone.

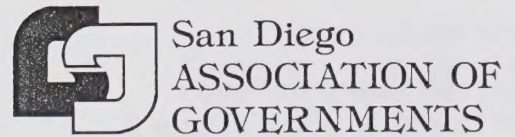
After these five issues are studied, the SANDAG Board and the public will be in a better position to judge the merits of growth-slowing policies.

Sincerely,



Eric Bowlby,
County General Plan 2020 Interest Group Member
Sierra Club, San Diego Chapter
PH# 619-284-9399

August 31, 2001,



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Eric Bowlby
Sierra Club, San Diego Chapter
3820 Ray Street
San Diego, CA 92104-3623

Dear Mr. Bowlby:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*.

This study had a relatively narrow focus: to determine if public policies can stop or slow population growth. The study did not mean to imply that we "can and should do nothing to reduce the rate of our growth." Rather, it determined that implementing public policies such as putting limits on housing growth would be largely ineffective in that regard.

The study's concentrated focus also means that you are correct in saying it includes "no evaluation of impacts on our environment and quality of life if our population increases by one million people." To that end, SANDAG staff has identified some next steps for fiscal year 2002 that will directly address your recommendations.

A scope of work for an infrastructure study very similar to what you describe is now being prepared, as is one for a carrying capacity analysis. We completely agree that quality of life standards, funding sources, and equity issues are all important elements of such studies, and they will be included.

The growth study's primary conclusion is that some amount of growth will continue to occur in the region, and in order to maintain our quality of life, it must be managed both responsibly and proactively. That is why we are asking the SANDAG Board to approve the final version of the report as a part of the overall REGION2020 growth management strategy.

Should you have further comments or questions, please contact my staff or me at any time. Thank you.

Sincerely,

GARY L. GALLEGOS
Executive Director

GLG/PK/ce



SAN DIEGO AUDUBON SOCIETY

2321 Morena Boulevard, Suite D • San Diego CA 92110 • 619/275-0557

July 1, 2001

Members of the Board of Directors
San Diego Association of Governments
c/o Gary Gallegos, Executive Director
401 B Street, San Diego CA 92101.

Via E-Mail: pka@sandag.org

Dear Boardmembers:

Subject: Comments on "Draft, Evaluation of Growth Slowing Policies for the San Diego Region",
April 17, 2001

The San Diego Audubon Society is very pleased that SANDAG is considering the systemic impacts of growth on our region. A study of the impacts of growth slowing policies is a reasonable part of such a consideration. We had looked forward to this document being the catalyst for an important dialogue on the future of our region. However, in its present form the subject document is shallow and biased and its conclusions misleading. Unfortunately it will interfere with a competent discussion of this important issue. We urge that SANDAG not adopt this document.

Our region is severely pushing its capabilities in terms of water supply, roads and highways, water quality, mass transit, endangered species, common wildlife, buildable land, affordable housing, and vulnerability to natural events. Our quality of life and the security of our region are seriously degraded as we get close to limits in each of these dimensions. The more we grow, the smaller the margins for error becomes for each of these resources. Accommodating our population in wiser ways will reduce these stresses and we support efforts to do so. But, that will not be enough in the face of persistent population growth.

The report finds that local governments have little influence over sources of population growth. However, they can easily reduce growth by not promoting it. A few months ago there was consideration of not moving the CVN Ronald Reagan to San Diego. Several local governments aggressively lobbied for that CVN to be homeported here, a move that will bring in tens of thousands of people. There was no analysis of the growth inducing aspects of this relocation, just thoughtless cheerleading and lobbying. There are scores of similar but less dramatic examples that collectively have had a huge impact on our growth.

CEQA requires that the cumulative and indirect impacts of projects be fully identified. Those impacts clearly should include the growth inducement of the project. The treatment of the growth inducement aspects of projects in IRS ranges from non-existing to cavalier. In reviewing hundreds of environmental documents certified by local governments, we do not recall ever having seen a substantive analysis of the growth inducing impact of a project in an EIR. Doing so would suggest incremental ways to control growth.

The jurisdictions of our region often offer premiums to corporations willing to relocate in our region. However we have not seen any jurisdiction offering any consideration to less suitable companies to leave our region. These are obviously ways in which local governments can have impacts on their growth rates, in spite of the findings of the subject document.

The report finds that there is no way to control internal growth, but offers no analytical support for this conclusion. It has been widely demonstrated that making birth control measures and education available to everyone who needs them has a significant impact on internal growth rates. The report's consideration of this issue is biased and shallow.

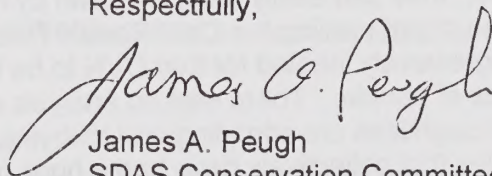
The report finds that growth control measures have greater impacts on the less affluent, so they result in social inequity and polarization. Surely growth control could be done in such a manner, but that is not the only possibility. It is very clear that the negative results of uncontrolled growth will also have the greatest impacts on the less affluent. The report should have explored this possibility.

Several other issues are dealt with poorly in this report and many of the conclusions are somewhat misleading, or at least oblique. It is not a good basis for future discussions.

Our region will control its growth, either passively or actively. We could identify our carrying capacity and respect it. Or we could continue to grow until this is a less desirable place to live. Then people who can afford to leave will do so leaving the less affluent behind in a declining natural and economic environment. The rise and fall of population centers due to human use exceeding the region's resources has been demonstrated throughout history. Over the past 30 years, every large city in America that had completely built-out inside its city limits commenced losing population and economic vitality. The rich fled to the suburbs, or to less over-built cities. Are we to learn nothing from this? Is San Diego setting itself up to be the next Buffalo, Detroit, or Philadelphia? Due to our current mobility, our huge capacity for consumption, and our broadly stressed resources these changes could occur relatively quickly.

We urge that SANDAG not adopt the subject report in its present form. However it does contain useful information. Reasonable measures to deal with growth must be identified. We urge that SANDAG find a means to salvage the useful information in the report and produce a new one that will contribute to a sound foundation for intelligently guiding the future of our region. If SANDAG is not willing to substantially rework this report it should be abandoned.

Respectfully,



James A. Peugh
SDAS Conservation Committee Co-Chair

August 31, 2001

James A. Peugh
San Diego Audubon Society
2321 Morena Boulevard, Suite D
San Diego, CA 92110

Dear Mr. Peugh:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*.

Your points about growth promotion activities in the region are well taken. Such efforts can be seen as counterproductive to slowing population growth. The draft report discusses this on pages 74-75. SANDAG's previous growth study (*Causes of Growth and Possible Control Measures in the San Diego Region*, September, 1987) described the potential impacts of eliminating these programs. While doing so may slow growth by some unknown degree, it would be at the cost of a series of adverse economic impacts. Public support for these programs was strong then, and appears to remain that way today.

As the current report states, job growth is the most fundamental driver of population growth. Therefore, reducing job growth could reduce population growth. Historically, however, there has been no willingness to take overt actions that would intentionally hamper the region's economy or its ability to compete for jobs. It is conceivable that there may come a point at when the region may wish to reconsider at least some growth promotion activities.

With regard to your comments on birth rates, the study provides evidence as to why family planning policies would be ineffective at slowing growth locally. Drastically reducing the number of births in the region would slow population growth. However, we believe that the region cannot reduce births to the degree necessary to slow growth. The key piece of statistical evidence presented is that births that are unwanted at the time of conception are only 10 percent of total births. Furthermore, pregnancies are unintended for two reasons: a child is not wanted, or a child is not wanted at that particular time. We conclude that even if family planning can eliminate all unwanted births, there would be less than a 10 percent total reduction in births. This is not to say, nor does the report mean to imply, that local family planning programs are not important.

It is also noteworthy that fertility rates in the region are, in fact, declining. This downward trend toward "replacement level" is factored into the 2020 Cities/County Forecast.

As for identifying and respecting the region's carrying capacity, we believe that the study's conclusion that public policies cannot enforce a predetermined population cap is correct. However, a regional carrying capacity analysis could be a helpful tool in monitoring the region's environmental health. For that reason, SANDAG is currently investigating exactly how such a study might be conducted, and, if feasible, we will move forward with one.

We have programmed a major study of current and future regional infrastructure needs for fiscal year 2002. This study will likely include some carrying capacity elements such as water and energy supplies. A scope of work for this study is now being prepared.

The growth study's primary conclusion is that some amount of growth will continue to occur in the region, and in order to maintain our quality of life, it must be managed both responsibly and proactively. That is why we are asking the SANDAG Board to approve the final version of the report as a part of the overall REGION2020 growth management strategy.

Should you have further comments or questions, please contact my staff or me at any time. Thank you.

Sincerely,

GARY L. GALLEGOS
Executive Director

GLG/PK/ce



THE CITY OF SAN DIEGO

June 29, 2001

Paul Kavanaugh
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

Subject: Draft Evaluation of Growth Slowing Policies for the San Diego Region

Dear Mr. Kavanaugh:

Thank you for the opportunity to comment on SANDAG's growth slowing policies study. This is a comprehensive study that thoughtfully analyzes many of the interrelated issues which impact population growth rates. We concur with the basic conclusion of the study which is that local government policies can have relatively limited impact on population growth rates which are largely determined by rates of immigration and natural increase. We agree that an approach to growth control focused on limiting housing development would fall unfairly on the less affluent and would not be effective or desirable. We also agree that government limits on employment land would not necessarily stop employment growth because employment could be accommodated in existing space or by more efficiently utilizing existing employment land. However, this would seem to be an area where government policies can and should play a role by fostering more efficient use of our scarce land resources.

We believe that it is becoming more imperative for local governments in this housing short region to avoid taking actions to limit new housing development or to encourage rapid growth of low paying types of jobs such as those in the tourism sector. Such jobs do not pay workers enough to afford housing available here. Economic development efforts in the future should be designed to encourage types of employment and employment locations which will improve rather than worsen the housing and mobility crisis in the County. SANDAG should take a stronger leadership role in encouraging local entities to take planning policy actions which will help to resolve and not exacerbate the jobs housing balance and housing affordability problems in this region.

While we agree with SANDAG's contention that reducing fertility rates should be addressed by national family planning policies, we note San Diego's history of supporting community-based social services and education programs. We believe that San Diego can continue this role and impact population growth by focusing support on policies and education programs which discourage unwanted teen pregnancies.

Planning Department

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Page 2
Paul Kavanaugh
June 29, 2001

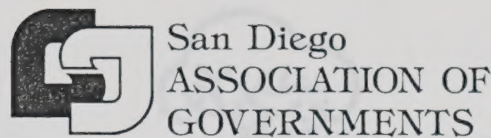
SANDAG acknowledges that the analysis done for this report did not delve deeply into the issue of alternative funding sources to provide the public infrastructure necessary to support future population growth. This is the matter that we believe is most critical and deserving of future attention by SANDAG and the various governmental jurisdictions in this County. Business impact fees, regional infrastructure funding and other locally generated revenue sources must be analyzed in greater detail and ultimately, be adopted in some form by local governments throughout this region to ensure that the quality of life can be maintained. An interesting and provocative note in the draft study is that tax increases on businesses at the level studied do not affect business expansion and location decisions. This is a consideration that should be studied in more detail because of its potential for adding to revenues.

Again we appreciate the opportunity to comment on this important study.

Sincerely,

A handwritten signature in dark ink, appearing to read "Coleen Clementson", with a stylized flourish at the end.

Coleen Clementson
General Plan Program Manager



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August 31, 2001

Coleen Clementson
Planning Department
City of San Diego
202 C Street, MS 5A
San Diego, CA 92101-3865

Dear Ms. Clementson:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. We are pleased that you concur with many of the findings and conclusions of the study, and we appreciate your comments of support.

We agree with your comments regarding the need to encourage higher paying jobs and siting them near housing. As you know, the Regional Economic Prosperity Strategy encourages public investments that will help foster high value added industries in the region. And the REGION2020 growth management plan calls for smart growth development, which, among other benefits, helps to maintain the jobs-housing balance within smaller geographic areas.

We strongly support the City of San Diego's efforts to discourage unwanted teen pregnancies. The report did not mean to imply that local family planning activities are not important. They are very important. Rather, the study concluded that even if local family planning could eliminate all unwanted births, there would be less than a 10 percent total reduction in births.

Finally, with regard to your comments about infrastructure needs and funding, SANDAG has programmed such a study for fiscal year 2002. The scope of work is being prepared now.

If you have any further comments or questions, please contact me at any time.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/ce

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, and County of San Diego.

ADVISORY/LIAISON MEMBERS: California Department of Transportation, Metropolitan Transit Development Board, North San Diego County Transit Development Board, U.S. Department of Defense, S.D. Unified Port District, S.D. County Water Authority, and Tijuana/Baja California/Mexico.



*Dedicated to preserving
the environment and
quality of life through effective
growth management*

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July 3, 2001

Members of the Board of Directors
San Diego Association of Governments
c/o Gary Gallegos, Executive Director
401 B Street, San Diego CA 92101

Re: Comments on the draft "Evaluation of Growth Slowing Policies
for the San Diego Region" dated 4/17/01

Dear Boardmembers:

In August 2000, the SANDAG staff sent out a Request for Proposal for a new growth study. Unfortunately, with a small fee offered and a short time specified, no acceptable proposals were received.

The resulting decision to produce a report "in-house" led to the current unproductive situation. The SANDAG staff was hampered by the same budget and time constraints that made this project unfeasible for outside consultants. In addition, the staff was faced with a conflict: How could slow-growth policies be objectively studied while the staff was simultaneously promoting growth accommodation policies as part of REGION2020? The result was a terribly inadequate draft report.

What the report intended: "Assess the likely effects of implementing growth controls (and of not implementing growth controls) with respect to short-term and long-term economic impacts, environmental impacts, and other quality of life factors such as the provision of adequate infrastructure, public facilities, and services".

What the report produced: A one-sided dismissal of slow-growth policies, based on faulty modeling and inaccurate figures.

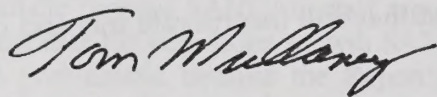
Letter to SANDAG Board from
Friends of San Diego, page 2

Since the report made no attempt to measure the impacts of large-scale growth accommodation, there is no basis to conclude that growth-slowing policies are better or worse than accommodation policies.

We recommend that the Board not adopt this report, but instead move forward with studies of infrastructure and carrying capacity, with both studies grounded in quality of life standards. Before evaluating the merits of slow growth, fast growth, or eventual non-growth, we need some answers:

- Can needed infrastructure be provided? Who will pay?
- What are the natural limits to growth?
- How will various growth scenarios impact the quality of life?

While the authors of the draft report are trying to persuade us that growth is inevitable, they have apparently failed to notice that 10 of the region's 19 jurisdictions have already achieved population growth rates that are half that of the national rate, or less.



Tom Mullaney, Chair
Friends of San Diego

September 4, 2011

Mr. Tom Mullaney
Friends of San Diego
4019 Goldfinch street, #130
San Diego, CA 92115

Dear Mr. Mullaney:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. Also, I enjoyed our meeting last month, and I hope our discussion was helpful.

The report's most basic conclusion is that some amount of growth is likely to continue in the region, and that the smart, responsible thing to do is to plan for it and manage it. The exact rate of the growth is somewhat beside the point. What is most important is that we do what is necessary in order to maintain our quality of life, as growth will occur whether or not we plan for it.

The good news is that growth in the region appears to be slowing. Recently received census data indicate that fertility rates are declining significantly faster than the 2020 Forecast predicted. We are currently preparing a new 2030 Forecast that will incorporate this and other new information.

We also will be embarking on a regional infrastructure study this year, in which we will examine the current deficits, future needs, and financing options. This will include items related to carrying capacity, such as water supply, water quality, energy, and open space.

If you have further comments or questions, please feel free to contact my staff or me at any time.

Sincerely,

GARY L. GALLEGOS
Executive Director

GLG/PK/dak

DEPARTMENT OF ECONOMICS

ECONOMICS BUILDING, 0508

Richard T. Carson
Professor

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July 3, 2001

Paul Kavanaugh
Project Manager
San Diego Association of Governments
404 B Street, Suite 800
San Diego, CA 92101

Dear Mr. Kavanaugh:

The analytical framework of the SANDAG staff's April 17, 2001 draft report "Evaluation of Growth Slowing Policies for the San Diego Region [hereafter Report]" is inadequate to address the issue of whether various policies would be effective in reducing growth. The Report should not be approved by the SANDAG Board until the deficiencies in the Report, noted below, are corrected.

The most obvious outward signs of the problems with SANDAG staff's work in this area are (1) its [Series 8, SANDAG 1994] overestimate of the population increase likely to occur between 1990 and 2000 by over 60% and (2) its [Report] overestimate of the percent increase in average household size occurring between 1990 and 2000 by over 300%.¹ Overestimation of the population increase is problematic because SANDAG staff argue that SANDAG members should change their general plans to accommodate the population growth SANDAG staff projects. Overestimation of the change in household size is problematic because the Report's finding that any policy action to control growth is largely ineffective is predicated on its assumption that that household size would simply increase to accommodate most of the projected population growth even if additional dwelling units were not built. The tiny change in household size between 1990 and 2000 reported by the U.S. Census Bureau suggests that the SANDAG staff's assumption is woefully inaccurate.

¹ SANDAG staff have argued that the percent forecast error should be calculated as a percentage of the total population. This may be correct for some policy decisions such as the number of people for whom some type of health service needs to be delivered. However, when the issue is how many new dwelling units to authorize, how many new schools to build, or what new water facilities are needed, the relevant quantity is the change in the population and the forecast error is the difference between the actual and predicted change in population. The magnitude of the overestimation of San Diego County's 2000 population is very large, particularly considering that at the time the forecast was made the economic downturn of the early 1990's was already apparent. The U.S. Census Bureau numbers for population and household size for the year 2000 are contained in its May 2001 report, "Profiles of General Demographic Characteristics: 2000 Census of Population and Housing" for California.

A careful look at the Report shows that its analytical findings are driven not by empirical data and a single comprehensive model of the factors influencing San Diego County's population growth but rather by three largely *ad hoc* assumptions concerning:

- (a) how household size changes in response to the number of housing units built,
- (b) how the number of commuters from outside the region changes in response to the number of housing units built, and
- (c) how the number of workers per square foot changes in response to the number of commercial square feet built.

These assumptions largely predetermine the Report's results. It is unfortunate that the expert panel that reviewed the Report chose to concentrate on implications of the policy conclusions rather than the underlying analytics driving those conclusions.²

The single most important assumption of the Report concerns how household size is likely to change in the number of housing units available, as this relationship is the main driver of housing limitation and job mix scenarios. There are three difficulties with this assumption. The first relates to the fact that SANDAG's forecast of 2000 household size (2.89 of the Report; up from 2.62 in 1980 [REPORT p. 27]) is way off the mark.³ The U.S. Census Bureau's recently released household size for 2000 is 2.73, which is barely changed from the 2.70 reported by the U.S. Census Bureau for 1990. The Report attributes the change from 2.62 to SANDAG's estimate of 2.89 in 2000 to a housing unit shortfall.

One of the problems with SANDAG's 2000 number is that it appears to be based on a different definition of household size than the one used by the U.S. Census Bureau and used by SANDAG for their 1980 starting point of 2.62. The U.S. Census definition of household size [hereafter HS1] reduces the total population count by the number of people who live in "group quarters" and then divides by dwelling units. The 1990 figure (2.81) used by SANDAG is the correct one under a common alternative definition of household size [hereafter HS2] that is less data intensive since it simply divides total population by the number of dwelling units. The corresponding U.S. Census Bureau number for 1990 using the HS1 definition is 2.70. Thus, SANDAG staff, by using two different definitions of household size, have effectively mixed apples and oranges at a key point in their calculation. In doing so they have incorrectly attributed what they believed to be a large increase in household size in response to an "odd" definition of a housing shortfall (the issue discussed next) to an inadvertent switch in household size definition. For 2000, the household size under the HS2 definition is 2.83. Thus, under either definition SANDAG had forecasted a very large change in household size between 1990 and 2000 (.19 under the HS1 definition and .08 under the HS2 definition) whereas the actual increase was much smaller [.03 under the HS1 definition and .02 under the HS2 definition)].

The Report assumes that the relationship between household size and housing units can be found by assuming that in the absence of a "housing shortfall" the 1980 household size would have been observed in 2000. This is, of course, a circular argument and ignores a variety of different factors such as

² Landis in his short two-page comment on the report notes, "Without seeing the insides of your input-output and econometric models, I can't comment definitively." Levy does not comment on any of the technical assumptions but does note that the outcome of one of SANDAG's policy scenarios (getting a smaller population by pursuing high valued-added industries) is wrong. Meyers correctly calls SANDAG's modeling approach a "sketch" (back-of-the-envelope) model. He believes that this is a useful approach because it is more comprehensive to a non-technical audience, but notes, "unknown biases may lurk beneath the surface". Meyers further notes the three key assumptions might be problematic, but he does not explore how faulty conclusions might be drawn if they are fundamentally in error.

³ Household size tends to be fairly stable over time and small changes in this number can, as the Report points out, have large implications for any policy involving the number of housing units.

demographic changes that are well known to influence changes in household size.⁴ "The assertion that a large-scale housing shortage exists in San Diego County was made without evidence to support it. The Report attempts to shore up the assertion with anecdotal evidence and reference to a recent (2000) California Department of Housing and Community Development report entitled "Raising the Roof: California Housing Development Projections and Constraints" [hereafter Raising the Roof]. The Report quotes this document as saying "California chronically under-produces housing, especially in coastal markets." However, a careful reading of this document shows that while it estimates that most of coastal California under-built new dwelling units during the 1990's, San Diego did not. The Raising the Roof report states in Chapter 6: "In San Diego County, 1990-94 housing production exceeded demand growth by 48,300 units." Exhibit 40 of Raising the Roof further estimates that housing production exceeded demand growth in the period 1995-1997 (the last period covered) by 23,709 units. Thus, this report provides no basis for claiming a housing shortfall during the 1990's.⁵

None of the other signs that an economist would expect to see if there were a large-scale housing shortfall in San Diego County are present. That is, there are no long waiting lines for either new houses or rentals, housing prices in San Diego County have not skyrocketed relative percentage terms to elsewhere in coastal California (or for that matter other major East or West Coast cities), and, when one uses a consistent household size definition, there has been no major increase in household size. The *fact* that there is not a large-scale housing shortfall in San Diego County should not come as a surprise. The literature on growth controls suggests that only large areas that impose housing restrictions have succeeded in reducing population growth. Housing restrictions that are isolated to particular areas in large cities or that are put forth in small cities surrounded by other cities may improve amenity levels locally but tend not to reduce overall population in the larger area.

What SANDAG staff have done is to confuse a shortage of affordable housing with an overall housing shortage. While there is solid evidence that many residents of the San Diego region cannot obtain affordable housing, the remedy to such a situation must be chosen intelligently. A shortage of affordable housing needs to be dealt with by the implementation of specific policies to deal with the problem. It cannot be overcome by simply building more housing units.

The second major assumption concerns interregional commuting. Here the Report (p. 27) simply assumes that there will be 0.27 additional in-commuters for every house not built. The source of this assumption is not stated in the Report (p. 27 and C4) but it is calculated using SANDAG's estimate of the 1980-2000 housing shortfall, which as noted in the previous paragraph is incorrect. Even if one assumed that there was a housing shortfall and that SANDAG had calculated its magnitude correctly, there is still a major conceptual problem—the major driver of changes in interregional commuting is likely to be changes

⁴ There are consistent ways to estimate the relationship between household size and various factors including demographic variables, population density, travel times, and household price. I provided such a model to SANDAG staff based upon county level data from the 1990 Census. SANDAG staff rejected this model arguing that it used data from outside San Diego and 1990 data was outdated. However, observed household size is the result of locational decisions by households across political jurisdictions and hence cannot be estimated using only aggregate San Diego County level data over time (as the Report attempts to do) if there are multiple factors that can influence household size over time. The Report assumes that a "housing shortfall" was the only factor influencing the change in household size between 1980 and 2000. The model I provided predicts the observed result (a very small increase in household size between 1990 and 2000) with the (partial) updated information now available from the 2000 Census (in particular, an increase in the percent of the population under 18 from 1990 to 2000).

⁵ Raising the Roof does estimate a shortfall for the 1980's of 79,715 units, which is roughly equal to the excess building during the 1990-1997 period so that virtually no housing shortage (as opposed to demographically driven change in household size) would be expected over the entire period. Thus, these results are more consistent with the notion that over the longer run, an area gets a population size largely consistent with the number of dwelling units that are built rather than having its population expand largely through increases in household size.

in commercial business patterns such as those induced by NAFTA rather than changes in the number of housing units, so that the "reference" 1980 baseline used by SANDAG staff for determining housing shortfall induced changes in interregional commuting patterns is clearly wrong.⁶

The third major assumption (p. 38, p. C8, Report) concerns how employment densities would respond to restrictions on non-residential development. In this instance, SANDAG staff have simply assumed that the number of employees per 1000 square feet would increase with no change in output or the number of jobs. It is unclear why there is any appearance of formal analysis in this case, as the answer was almost directly assumed. No evidence is provided to support the assumption that current employment densities can be increased without economic cost. Indeed, the assumption made here by SANDAG staff can be seen as a quintessential version of the economist's free lunch since it suggests that companies are not maximizing profits since they are paying for a greater quantity of commercial and industrial space than they actually need.

To help bolster the case for this implausible assumption, SANDAG staff, in response to my comments on the early draft of the Report, now includes a table (p. 38) that shows low, average, and high numbers of employees per square foot for eight types of buildings ranging from an office high rise to a hotel. The Report states that employment density is not allowed to increase by more than 18.2% (at which time all buildings would be occupied at their highest currently observed densities). This is a very peculiar notion as it assumes for instance that hotels with a small number of employees per square foot (which tend to be the inexpensive ones) would increase their number of workers per square foot to that currently found in the most expensive hotels. Likewise, the number of employees in each shopping center store is assumed to be increasable toward that found in the most labor intensive stores, irrespective of what is being sold. Similar arguments can be made for manufacturing where some processes that require large amounts of space per worker would suddenly fill-up with workers until they looked like the most labor-intensive business. All of these scenarios are unlikely and should not be seriously considered.

What does SANDAG need to do? The first is to reject this Report as being inadequate to address the questions the SANDAG Board wanted addressed. The second is for SANDAG to recognize that it needs to put some serious resources into improving its analytical modeling capabilities. SANDAG staff tried to make do with a hopelessly outdated demographic and economic forecasting model that was adequate for many tasks (but not this one) when it was put together over 20 years ago when San Diego's economy was driven by military expenditures and largely isolated from the rest of California. Thus, what the Report produced was analysis by assumption rather than results that are driven by data and solid analytical modeling. What is needed is a complete overhaul of this model and an effort to build into it the ability to answer the wide range of issues that SANDAG Board members are likely to face over the next decade.

Sincerely,

Richard T. Carson
Professor

⁶ The Report (p. 31) does discuss a survey by the cities of Temecula and Murrieta that shows residents of southern Riverside County commuting into San Diego County. However, a close look at this data suggests that most of these commuters are going to places in northern San Diego County such as Escondido, Rancho Bernardo, and San Marcos where commute times are probably less than from downtown San Diego. If such commuting is a concern, it suggests policies of discouraging new development along the northern part of the I-15 corridor. More generally, the Report should recognize that interregional commuting is possible both ways. To the extent that such commuting is driven by relative housing prices and travel times, large scale building of homes in the northern part of San Diego County could turn it into a bedroom community for Orange and Riverside counties.



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September 5, 2001

Dr. Richard T. Carson
Department of Economics
University of California, San Diego
210 Economics Building, 0508
La Jolla, CA 92093-0508

Dear Dr. Carson:

Thank you for submitting additional comments on the draft "*Evaluation of Growth Slowing Policies for the San Diego Region*." per your letter dated July 3, 2001.

The purpose of this study is to address a series of questions regarding public policies designed to slow growth. The study concluded that growth will occur, even if it is not planned for, and that growth slowing policies, while desirable to some residents, are largely ineffective. Perhaps more importantly, policies designed to slow growth are not equitable, and have a disproportionately adverse effect on the region's low-income residents. The study also concluded that to preserve the region's quality of life during times of population growth requires a sound growth management policy. A growth management policy is different from an accommodation policy, and is based on the principles of smart growth: reducing urban sprawl, placing jobs near housing and housing near jobs, offering more choices in housing types and in transportation modes, and providing adequate infrastructure of all types.

This study has a relatively narrow focus: to answer the basic questions posed in response to the 2020 Forecast. It is intended as a starting point for continued public discussion of the issues. We recognize that there are important topics that are not fully addressed here, such as the costs and funding sources of providing the public infrastructure that is necessary or desired to support future population increases. Depending on direction from the SANDAG Board, the next steps might be to look at this topic or other related issues. However, they are not the primary focus of this study and do not affect the conclusion that local public policies are ineffective at slowing growth.

The remainder of this letter is the response to your specific comments.

Comment: The analytical framework of the study is inadequate for addressing the issue of whether public policies would be effective in reducing growth. The SANDAG Board should reject the report until the deficiencies noted below are corrected.

Response: Staff believes the analytical framework of the study is adequate for addressing the issue of whether public policies would be effective in slowing growth and for answering the questions posed by the SANDAG Board. The Board should not reject this study because the methodology is sound, the results of the simulations are in line with similar reports from other

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, and County of San Diego.

ADVISORY/LIAISON MEMBERS: California Department of Transportation, Metropolitan Transit Development Board, North San Diego County Transit Development Board, U.S. Department of Defense, S.D. Unified Port District, S.D. County Water Authority, and Tijuana/Baja California/Mexico.

areas, and the assumptions driving the simulations are based on empirical evidence and clearly documented sources. Furthermore, the panel of experts has supported our procedure and confirmed the validity of the conclusions. Staff has provided responses to your concerns on the methodology below and in previous responses to you, and has revised the draft such that our methodology and assumptions are clearly stated and documented.

Other studies that have reached similar conclusions include: 1) "Evaluation of No-Growth and Slow-Growth Policies for the Portland Region." Prepared for Metro by Eco Northwest, June 1994. 2) Landis, John D. "Do Growth Controls Work? A new assessment." Journal of the American Planning Association, Vol.58, No.4 Autumn 1992. American Planning Association, Chicago, IL. 3) Glickfeld, Madelyn and Levine, Ned. "Regional Growth...Local Reaction: The enactment and effects of local growth control and management measures in California." Lincoln Institute of Public Policy: Cambridge, MA.1992. 4) Center for Continuing Study of the California Economy. "Land Use and the California Economy." A report for Californians and the Land, 1999. 5) Kolankiewicz, Leon and Beck, Roy. "Weighing Sprawl Factors in Large U.S. Cities." NumbersUSA.com, 2001.

Comment: SANDAG staff argues that SANDAG members should change their general plans to accommodate the population growth SANDAG projects.

Response: Staff does not recommend that jurisdictions revise their General Plans simply for the purpose of accommodating population growth. General Plan revisions are important for implementing smart growth principles, improving quality of life, using land more efficiently, and for protecting and preserving open space and parks. It is important that the region look beyond 2020 and begin to incorporate fundamental changes into the planning process that will enable residents to enjoy a quality of life in the future equal to or better than what exists today.

Comment: The most obvious problems are (1) the "Series 8" overestimate of the population increase likely to occur between 1990 and 2000 by over 60 percent and (2) the overestimate of the percent increase in average household size between 1990 and 2000 by over 300 percent. The tiny change in household size between 1990 and 2000 from the most recent Census data suggests that SANDAG's assumption is inadequate.

Response: SANDAG's forecasts have proven to be accurate over time. Of course, in the short run, fluctuations in the economy and the regional population may not be captured. That was especially true with regard to the longest, deepest recession Southern California has seen since the Depression. However, as shown below, our long-term estimates have been within an acceptable range and prior to Series 8 have always *underestimated* population growth.

Forecast Name	Base Year	Forecast Year	Years From Base	Forecasted Population	Observed Population	Difference Num.	Pct.
Series 2A	1972	2000	28	2,723,000	2,813,833	-90,833	-3.2%
Series 5	1978	2000	22	2,647,200	2,813,833	-166,633	-5.9%
Series 6	1980	2000	20	2,699,200	2,813,833	-114,633	-4.1%
Series 7	1986	2000	14	2,784,195	2,813,833	-29,638	-1.1%
Series 8	1990	2000	10	3,004,434	2,813,833	190,601	6.8%

The forecasts employ the best information that is available at the time of production, along with the guidance of a broad-based technical advisory committee. The population forecasts that SANDAG produced in the 1990s (Series 8 in 1994 and 2020 Forecast in 1999) used postcensal estimates from the California Department of Finance (DOF) as a base population at the time that the forecasts were produced. From the 2000 Census, we now know that those estimates were too high, as they did not account for all of the out-migration that occurred during the recession. DOF's original population estimate that was used as a base for the Series 8 forecast indicated a population growth of 186,000 between July 1990 and July 1994. After the 2000 Census was released, DOF corrected its annual estimates for the 1990s, and they now show a growth of just 91,000 between 1990 and 1994.

As with other forecasts at the time, the Series 8 forecast did not anticipate that the recession would be as long and as deep as it was. However, since the end of the 1990s, annual growth rates in the region have been similar to those in both the Series 8 and 2020 Forecasts.

SANDAG uses DOF estimates for the region and its jurisdictions because they are the "single official source of demographic data for State planning and budgeting" (DOF Web site) and because they have been very accurate in the past. For example, DOF's initial estimate for January 1, 1990 (2,509,914) was within one-half of one percent of the region's April 1, 1990 census count (2,498,016). While their initial estimate of the region's population on January 1, 2000 was 3.5 percent higher than the April 1, 2000 census count, estimates for seven of the ten largest counties in California were within two percent of the census count, including an even five overestimated and five underestimated. The Census Bureau's estimates for the San Diego region were consistently lower than DOF's in the 1990s, but the Census Bureau also overestimated the population of the region, while underestimating the population of the U.S. and California. We will continue to use DOF's estimates, but we will carefully monitor them and work closely with DOF to correct apparent problems.

While SANDAG's forecast model retains the same name (Demographic and Economic Forecasting Model, or DEFM) as its predecessor from the 1970s, the current model is fundamentally restructured. A competitive bidding process in 1996 resulted in a new model on a new platform that included new software and reconfigured model logic. Our models are constantly evaluated and improved, and as more census data become available, we will re-evaluate the model again. The problems you observed and the difference between the forecast and census data appear to be related more to the accuracy of the base year data (even though it was the best available at the time) rather than to the model's shortcomings.

The baseline forecast referred to throughout the study was produced using DEFM, but the simulations in the growth study do not use the model explicitly. Relationships between variables in the simulations are based on historical data and compared to the baseline forecast. Furthermore, any revisions to data assumptions are taken into account as soon as possible. For example, the 2000 estimate of household size (2.89) used in the initial draft of the study was included in DOF's initial January 1, 2000 population and housing estimate for San Diego County. We have now revised the study to incorporate the 2000 Census household size (2.73). More specifically, population, household size, and vacancy rate figures have been updated to reflect the new census information. Revising the methodology has not had any effect on the

study's original findings or conclusions. The 2000 Census shows the region's vacancy rates declining and household size increasing (despite national trends toward decreasing household size).

Comment: There is no large-scale housing shortfall in San Diego County, and the assertion that a large scale housing shortage exists was made without evidence to support it. There are three problems with this: 1) SANDAG's household size projections are way off the mark, 2) staff have incorrectly attributed an increase in household size to a housing shortfall when in reality it was a switch in household size definition, and 3) staff incorrectly links the shortfall in housing units to household size when it should be linked to other demographic changes, such as the percent of the population under age 18.

Response: There is much evidence to support a housing shortfall at the regional and state level, as was discussed in our response to your previous letter. Additional explanation of the shortfall has also been incorporated into the revised study. Moreover, many recent articles in the local media indicate low vacancy rates, unavailable units, and a significant increase in the jobs housing imbalance similar to other coastal areas. When less than 25 percent of the homes sold in the region are affordable to families earning the median household income, it strongly suggests that there a shortage of housing supply relative to demand.¹

Our household size projections utilize the most recent data available and are calculated by dividing the household population by occupied units. Since the Census was not available during the first draft of the report, we used figures from the California Department of Finance (DOF). The DOF numbers were the best available at the time the calculations were made. Our revised draft incorporates the 2000 Census data into the estimates of the change in household size.

Our change in household size does not reflect a change in definition or ignore a variety of other factors, as you suggest. Throughout the study, household size is defined as household population divided by total households (occupied dwelling units, not total dwelling units). In the censuses of 1980, 1990, and 2000, average household size was 2.62, 2.69, and 2.73 respectively. The initial 2000 DOF estimate of 2.89 was also based on this definition, but was based on estimates that overstated household population and understated households.

In the simulation, the change in household size is attributed to a housing unit shortfall, in which the supply of housing does not equal the demand for housing even after adjusting for demographic factors. We believe that the regional household size increase between 1980 to 2000 was due in part to a shortage of supply compared to demand. The assumption is based on the finding that factors other than demographics cause household size to increase. More specifically, household size in the U.S. fell between 1980 and 2000. Controlling for demographic factors (age, sex and ethnicity) we would expect household size in the San Diego region to decrease over the

¹ National Association of Home Builders' Housing Opportunity Index (HOI). The HOI is a quarterly measure of the percentage of homes sold that a family earning the median income can afford to buy. The HOI for July through September of 2000 ranked 177 metro areas on the basis of 740,000 recorded home sales for a nationwide score of 58.1. San Diego's HOI is 25.1. Springfield, Illinois had the highest affordability rating (89.6), while San Francisco, CA had the lowest (5.7). Rankings for other California areas include Ventura County (34.6), Orange County (36.1), Riverside/ San Bernardino Counties (50.8), and Sacramento County (46.7).

same time period. It did not. With no change in household formation rates, aging of the population (which contributes to lower household size) plays a greater role than increasing ethnic diversity (which contributes to higher household size). Also, as noted in your regression analysis, a major determinant of household size is the population under age 18. The share of the population 17 and under in the region was the same in 1980 and 2000 (25.7 percent in 2000 and 25.6 percent in 1980).

In order to maintain consistency within the simulation, we compare 1980, 1990, and 2000 Census figures to estimate the percent change in household size over a twenty-year period. Next, we derive a parameter for the change in household size related to the change in housing units (using Census data for both values). Finally, we apply that parameter to the change in household size between 2000 and 2020 in the simulation. This allows us to maintain consistency with our the results from the 2020 regionwide forecast while continuing to incorporate the most recent and widely used data available.

Comment: I provided SANDAG with a model that is able to consistently estimate the relationship between household size and various factors.

Response: We recognize that there are other approaches to computing elasticities, such as the regression method you presented to us. However, we have some concerns about the results of your analysis, its applicability to the San Diego region, and the interpretation of the coefficients. First, the analysis includes all counties in the U.S. We question if the parameters established are applicable to our region. Second, the model may be misspecified because the analysis does not include any variable that attempts to measure whether the supply of units equals the demand for units, which is a potential contributor to higher household sizes. Third, we feel that cross-sectional data is inadequate to compute elasticities that attempt to measure change over time. Finally, the major variable that drives the change in household size in your model, population under age 18, remained constant in the San Diego region between 1990 and 2000 (the time period you suggest applies to your model findings).

Comment: The California Department of Housing and Community Development's report, entitled *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*, did not support a housing shortage in San Diego between 1980 and 2000.

Response: Staff believes that the *Raising the Roof* report does support a housing shortage in the San Diego region. The report estimates demand for housing units based on employment growth. According to their methodology, if the estimated demand for housing (based on job growth) exceeds supply, there is a shortfall. The report did suggest that the estimated demand for housing between 1990 and 1997 in the San Diego region was below the supply of units, reflecting the severity of the recession on the region's economy. The report also claims that in the 1980s, the supply of units in the region was greater than demand to an extent equal that of the "over-supply" in the 1990s. Finally, the report states that "excess supply in Southern California would not be worked off until 1998," implying a brief state of equilibrium in 1998 that was soon replaced by a shortage of available housing units.² Rapid levels of employment and population

² State of California, Department of Housing and Community Development, *Raising the Roof: California Housing Development Projections and Constraints, 1997-2020*. May, 2000. Chapter 6.

growth in the 1995-2000 time period, low vacancy rates, increased inter-regional commuting, and rapidly increasing home prices and rental rates all lead us to believe that the region is currently experiencing a housing shortage.

Comment: What SANDAG staff has done is confuse a shortage of affordable housing with an overall housing shortage.

Response: Staff is confident that our understanding of both affordable housing and the region's overall housing shortage is correct. More importantly, imposing restrictions on housing or the economy has a disproportionately negative effect on lower income residents. These policies make residents less likely to be able to afford housing and, therefore, make the San Diego region less equitable than in the absence of such a policy. We also agree that simply building more units will not solve our region's affordable housing problems. SANDAG believes that building a variety of different types of units, some at higher densities, is one of the many ways to address the affordable housing issue. Housing is one of the five major components of the REGION2020 growth management plan and is an essential factor in maintaining the region's quality of life.

Comment: The analytical findings are driven by ad hoc assumptions concerning how the number of commuters from outside the region changes in response to the number of housing units built. The source is not listed in the Report.

Response: The findings are not driven by assumptions, they are driven by regional observations empirical information, simulation results, and conclusions from similar studies. The assumptions in the simulation are based on careful analysis of relevant literature, and on the knowledge of SANDAG planning staff.

The State legislature recognizes the jobs to housing imbalance between San Diego and Riverside County. They currently are funding a joint project between SANDAG, SCAG, and the Western Riverside Council of Governments to study the inter-relationships between the two regions.

We also have revised the draft to include the sources of the commute data. For your reference, the commute adjustment is based on 1980 and 1990 census data, and a survey conducted by San Diego Dialogue at San Ysidro and Otay Mesa in 1992. The estimate for 2000 is based on changes in estimated traffic volumes between 1990, 1992 and 2000 from *San Diego Region Average Weekday Traffic Volumes* (SANDAG, 2001).

Comment: The analytical findings are driven by ad hoc assumptions concerning how the number of workers per square foot changes in response to the number of commercial square feet built. Staff assumes the employment density would change with no change in output or number of jobs.

Response: Staff does not assume that output and jobs remain constant. In the simulation, there is an increase in jobs and output between 2000 and 2020. Employment space, on the other hand, is limited under the policy restriction. Thus, employment density rises under the policy, as more people are accommodated in less space compared to the baseline.

Your letter also claims that it is unlikely that all of the region's businesses will occupy the highest current density. The density parameter is based only on the highest observed density from a regional survey, and not on the highest density possible per use. Therefore, the 18.2 percent limit implies increasing density, but not to the highest extent imaginable. We are not suggesting that every hotel, every retail outlet, and every manufacturing firm increase their density to the greatest possible extent. We are simulating an overall regional increase in employment density (within historical parameters and in line with other areas in the nation) in response to a limit on space. Some firms will increase their density quite a lot, others will not.

Comment: The Board should reject this report and update its forecast process.

Response: For the reasons mentioned in our first response above, we feel that the Board should accept the final draft of this study. We agree that our forecasting models must continue to evolve to fit the region's dynamics and we are continually improving and updating our process and data. Input from experts from beyond SANDAG will be very important as we decide what features of the model should be changed and how to implement those changes. We have invited you to participate in this process, serving on the technical committee that oversees the update of the regional forecast.

SANDAG appreciates your comments and will include the text of your letter with the final report as part of an appendix. Although the response period has ended, should you have any questions or additional concerns, please call me at (619) 595-5349.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/ce

JAMES C. SCHMIDT

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Office Phone • (619) 469-4641
Office Fax • (619) 469-5927

June 5, 2001

San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101

Attention: Paul Kavanaugh Re: my comments on DRAFT of EVALUATION OF GROWTH
SLOWING POLICIES FOR THE SAN
DIEGO REGION

Dear SANDAG Directors:

I have carefully reviewed the DRAFT and can state that it is the best study of the growth issues I have ever seen and this goes back 30 years. I have been involved in affordable housing since 1969 as Managing Officer and later President of San Diego Federal/Great American and retired in 1988. During that era our institution was told that we had the best CRA record of any major S & L in the U.S. Currently I serve as a public member of the City/County Re-Investment Task Force as an appointee of Co-Chairs George Stevens of the San Diego City Council and Supervisor Leon Williams (succeeded by Ron Roberts who re-appointed me). The Task Force enforces the Community Re-Investment Act of 1977 (CRA) with the local result that financial institutions are doing a good job in financing affordable housing and serving disadvantaged communities in San Diego County.

The growth management issue came to the forefront in the early 1970s. Mayor Wilson appointed me to be Chairman of the Mayor's Balanced Community Task Force. Our Task Force unanimously opposed the activities of organizations like the Sierra Club which proposed a ballot measure called the "Slow Growth Ordinance". Fortunately the community realized that the measure would contribute to the high cost of housing and it soon was "dead on arrival".

The first sentence of the DRAFT's Conclusion states, "This study concludes that continued population growth in the San Diego region is inevitable. Put simply, the region cannot stop any of its sources of growth". This conclusion is factual and yet opponents of growth who appeared at the April 27 hearing like Carolyn Chase and Tom Mullaney, continue to attack government, business organizations and builders in the name of environmental protection. They argue against sprawl and at the same time do not step up to the plate and to support and help the builders solve the construction defect problem which will increase both housing density and housing affordability. Other benefits of the elimination of the construction defect problem (the solution must include home buyer defect protection) will include the encouragement of more use of transit which will help reduce congestion. The trial lawyers unfortunately oppose any workable solution to construction defect elimination because it will interfere with their ability to collect their very high legal fees. The environmental opponents of growth need to strongly support the builders to help increase housing density.

There are several reasons why I was delighted to review the DRAFT and see the Conclusion and they are based upon my history and personal experiences. In my home town in Illinois the population has dropped from 17,000 to 13,000. Unless a young person has a family business to join most have to leave town in order to get a job. When I go back there to see old friends it is sad and makes me feel very lucky to live in an area where our children have the opportunity to stay and get jobs.

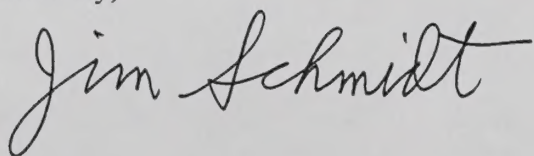
In 1961 after taking the California bar exam I became the first House Counsel at Home Federal and what an experience that was. We lost 38,000 aerospace jobs between 1961 and 1965 and the hardships on people were terrible. San Diego had a net loss of jobs in both 1962 and 1963 and our residential vacancy factor kept rising up to a high of 11.1% in 1965. Foreclosures were common place as people who lost their jobs couldn't get new jobs and many had to leave San Diego. It was a chilling feeling to be deeply involved in handling serious real estate problems. San Diego State University has always had an outstanding Business School and during this era graduates had to leave San Diego as few jobs were available. In addition to lay-offs many companies had a freeze on hiring which happened at Home Federal where we reduced our staff by 20% in 1964 without firing even one person. There were very few positives in the 1961-65 era and finally in 1966 the economy turned with 24,000 net new jobs. This positive continued and was met by the anti-growth movement in the early 1970s. Delays getting permits started and housing affordability got worse and worse to the point where today in San Diego County only about 25% of families can afford to purchase a median priced home. In April the median price of homes sold reached a record \$264,000, 18.9% higher than the April 2000 price of \$222,000.

Each month I write an article for the Transcript on either transportation or housing. Attached is a copy of my 1998 article "A Team Effort" which was in response to one of Ms. Chase's attacks. The article provides more background on the growth issue and affordable housing. One reference in the article is to the now out of publication book, "New Homes and Poor People" which SANDAG has in its records. The book, prepared by the Institute for Social Research of the University of Michigan, concludes that new housing built anywhere creates a sequence of housing moves that helps low and moderate income residents. The conclusion states that there is an average of 3 ½ housing moves for every new home built – for 1,000 new homes this means 3,500 housing moves! A new sub-division in North County for example can help City Heights residents as more housing opens up with each new home that is added. San Diego needs more housing to accommodate our growth and make housing more affordable.

So in summary what SANDAG's excellent study does is to tell the truth on growth. In an area like San Diego with our strong economy (40,000 new jobs added in 2000) we need to support solutions to accommodate growth like upgrades and extensions of freeways and roads and more subsidies for transit users in order to minimize the impacts. This also means to stop opposing new housing as well. A question? - Do the attackers of growth actually favor San Diego having a poor economy so that jobs are not available, our children have to leave town and fewer people will move here? They should be asked to respond directly to that question at hearings and meetings when they appear to attack new housing and argue against accommodating growth. Lets hope the attacks will stop and attackers will become supporters and team players.

So keep up the good work SANDAG. Your DRAFT is outstanding. Make it the final version as the information is both accurate and positive and is very much in the public interest.

Sincerely,

A handwritten signature in cursive script that reads "Jim Schmidt". The signature is written in dark ink on a white background.



San Diego
ASSOCIATION OF
GOVERNMENTS

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August 31, 2001

James C. Schmidt
8383 Center Drive, Suite J
La Mesa, CA 91942

Dear Mr. Schmidt:

Thank you for reviewing and commenting on the draft of SANDAG's most recent growth policies study, *Evaluation of Growth Slowing Policies for the San Diego Region*. We are pleased that you concur with the findings and conclusions of the study, and we appreciate your comments of support.

A final version of the report is being produced now, and will be presented to the SANDAG Board of Directors at their meeting on September 28, 2001. If you have any questions or further comments, please contact me at any time.

Sincerely,

PAUL KAVANAUGH
Project Manager

PK/ce

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